Construction Notice Fiddlestix Switch & Poston-Ross 138-kV Cut-In Project



PUCO Case 23-0122-EL-BNR

Submitted to:

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

Submitted by:

AEP Ohio Transmission Company, Inc.

February 17, 2023

Construction Notice

AEP Ohio Transmission Company, Inc. Fiddlestix Switch and Poston-Ross 138-kV Cut-In Project

4906-6-05

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

4906-6-5(B) General Information

B(1) Project Description

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

The Company is proposing the Fiddlestix Switch and Poston-Ross 138-kV Cut-In Project (the Project), in Vinton County, Ohio. The Project is necessitated by a request from Buckeye Power, Inc., on behalf of South Central Power ("SCP") for a new delivery point from the Poston-Ross 138-kV transmission line. The Project involves cutting into the Poston-Ross 138-kV transmission line and installing a new three-way phase-over-phase (PoP) switch (the "Fiddlestix Switch"). The Project will utilize new easements. The overall project will also require a 1.5-mile greenfield 138 kV transmission line, which will connect the Poston-Ross 138 kV transmission line, Fiddlestix Switch, and SCP's, non-jurisdictional, distribution stepdown Hesboro Station, and filed with the OPSB under separate cover (Case No. 23-0123-BLN).

The location of the Project is shown on Figure 1 and 2 in Appendix A.

The Project meets the requirements for a Construction Notice Application (CN) because it is within the types of projects defined by item 2(a) of Ohio Administrative Code Section 4906-1-01 Appendix A of the Application Requirement Matrix For Electric Power Transmission Lines:

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

The Project has been assigned Public Utilities Commission of Ohio (PUCO) Case No. 23-0122-EL-BNR

B(2) Statement of Need

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

Buckeye Power, Inc. on behalf of SCP requested the Company provide a new 138-kV delivery point on the Poston-Ross 138-kV transmission line for their new Hesboro Station. SCP load is 3.5 MW and it is projected to peak in the following several years, which could cause the loading at the SCP's Hesboro Station to reach 7 MW. Hesboro Station will also serve as the backup for SCP's Gibisonville Station. The scope of this project entails tapping AEP's Poston-Ross 138 kV transmission line, installing a three-way phase-over-phase motor operated air break (MOAB) switch, and revenue metering at Hesboro Station. From the switch approximately 1.5 miles of greenfield 138 kV transmission line will be built, known as the Fiddlestix Switch - Hesboro South Central Power 138 kV, terminating at the SCP's Hesboro Substation.

Failure to move forward with the proposed project will result in the inability to serve SCP load expectations as well as failing to address the reliability concerns experienced by SCP related to their existing distribution service.

The need and solution for the entire project was presented and reviewed with stakeholders at the July 2019 and March 2020 PJM SRRTEP meetings. The project was subsequently assigned PJM supplemental number s2222. This Project was included in the Company's 2022 Long Term Forecast Report, and is located on page 184, see Appendix B.

B(3) Project Location

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

The Project is located in Vinton County, Ohio. Figure 1 in Appendix A shows the location of the proposed Project in relation to the existing utility infrastructure in the area.

B(4) Alternatives Considered

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

The Company considered two switch locations for the overall project. The selected switch location reduces tree clearing, access road length, and was preferred by the property owner. The selected greenfield route is the most direct alternative while reducing environmental impacts, access road impacts, and was preferred by the property owner along the greenfield extension.

The preferred location of the Project was dictated by existing infrastructure, the proposed placement of the Ilesboro Station, minimizing impacts to property owners by locating the greenfield extension along property boundaries and edges of fields, and minimizes impacts to the environment by avoiding tree clearing and impacts to streams and wetlands to the extent practicable. The preferred location of the Project

minimizes impacts to the community and the environment, and represents the most suitable location and most appropriate solution for meeting the Company's needs.

B(5) Public Information Program

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

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

B(6) Construction Schedule

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

Construction of the Project is planned to begin in May 2023, and the anticipated in-service date will be December 2023.

B(7) Area Map

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

Figure 1 in Appendix A provides the proposed Project area on a map of 1:24,000 scale (1 inch equals 2,000 feet), and provides the relevant locations of the Project on the United States Geological Survey (USGS) 7.5-minute topographic map of the New Plymouth and Zaleski quadrangles. Figure 2 in Appendix A show the Project area on ESRI World Imagery at a scale of 1:6,000-scale (1-inch equals 500 feet). The ESRI World Imagery is dated May 2021.

To visit the Project Site from Columbus, Ohio, take I-70 East for 4.9 miles. Then, take exit 105 to merge onto US-33 E/Southeast Expressway towards Lancaster. Continue for 44.2 miles until taking the OH-93 exit towards Logan. Then, turn left on OH-93 South and continue for 12.5 miles. The northern end of the Project Site is 0.2 miles south of where Fairview Ridge Road intersects OH-93. The approximate address of the Project Site is 23084 OH-93, Logan, OH 43138, at latitude 39.38998° longitude -82.45774°.

B(8) Property Agreements

The applicant shall provide a list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the

facility and a list of the additional properties for which such agreements have not been obtained.

A list of properties required for the Project are provided in the table below.

Parcel ID	Agreement Type	Easement Agreement Obtained (Yes/No)
14-00045.000	New Easement	No
1400504002	New Easement	No
1400046000	New Easement	No
1400504000	New Easement	No

B(9) Technical Features

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

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

The transmission line cut-in is anticipated to include the following:

Voltage: 138kV

Conductors: 2x (3) 1033 KCMIL (Curlew) ACSR (54/7)

Static Wire: (1) 0.646" 96 Ct OPGW & (1) 7#8 Aluminum Clad Steel

Insulators: Polymer ROW Width: 100 feet

Structure Type: One (1) Two-Pole Double circuit, Steel monopole Self Support Deadend

The Fiddlestix Switch is anticipated to include the following:

Voltage: 138kV

Conductors: 2x (3) 1033 KCMIL (Curlew) ACSR (54/7) & 1x (3) 336 KCMIL (Oriole) ACSR

(30/7)

Static Wire: One (1) 0.646" 96 Ct OPGW & (1) 7#8 Aluminum Clad Steel

Insulators: Polymer

ROW Width: 100 feet & 80 feet

Structure Type: One (1) Phase-over-Phase, Self-Supported, 3-Way Switch Pole

B(9)(b) Electric and Magnetic Fields

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

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

B(9)(c) Project Cost

The estimated capital cost of the project.

The capital cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately \$1.5 million using a Class 4 estimates. Pursuant to the PJM OATT, the costs for this Project will be recovered in the AEP Ohio Transmission Company Inc.'s FERC formula rate (Attachment H-20 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Ecological Impacts

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

B(10)(a) Land Use Characteristics

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

Aerial photographs of the Project vicinity are provided as Figure 2 in Appendix A. The Project is located within Swan Township, Vinton County. The Project location and vicinity are rural in nature and land use is primarily of non-maintained forest and scrub-shrub vegetation with lesser extents of old field, grassland, agriculture, and scattered rural residential.

B(10)(b) Agricultural Land Information

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

The Vinton County Auditor maintains an online database of agricultural district land in Swan Township. Vinton County was consulted on January 13, 2023, and there were no parcels within the Project ROW identified as agricultural district lands. As this Project is intended to replace existing transmission line infrastructure, including transmission poles, no new agricultural districts or other agricultural land uses would be converted as a result of the Project.

B(10)(c) Archaeological and Cultural Resources

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

The Company's consultant completed Phase I Archaeological and Phase I History/Architectural surveys to be coordinated with the State Historic Preservation Office ("SHPO"). No archaeological sites were

documented within the Project area, and no historic properties listed or eligible for listing in the National Register of Historic Places were identified. Coordination with the SHPO was initiated in October 2020. The Company's consultant recommended that the Project will have no adverse effect on historic properties and no further cultural resource work would be necessary. On November 20, 2020, the SHPO concurred with these determinations and concluded that the Project would have no adverse effects on historic properties. The agency responses are provided in Attachment C.

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

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

A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHCD000005. The Company will also coordinate storm water permitting needs with local government agencies, as necessary. The Company will implement and maintain best management practices as outlined in the Project-specific Storm Water Pollution Prevention Plan to minimize erosion control sediment to protect surface water quality during storm events.

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

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

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

Coordination with the Ohio Department of Natural Resources (ODNR) and United States Fish and Wildlife Service (USFWS) was initiated in September 2022 during the planning stages of the Project to obtain records of protected species located in the vicinity of the Study Area. On September 21, 2022 and September 30, 2022, the USFWS and ODNR, respectively, replied to the emailed requests for records of protected species within an extended area around the Project Site. The agency responses are provided in Attachment C.

The USFWS stated that the Project lies within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*), both of which can be present in woodlands and forest stands. The ODNR responded identifying state threatened and endangered species that may occur in the project vicinity. These species include four state endangered bat species: Indiana Bat, northern long-eared bat, little brown bat (*Myotis lucifugus*), tricolored bat (*Perimyotis subflavus*). The ODNR recommends that trees be conserved, but if they must be cut, mist net

and acoustic surveys should be conducted to determine the presence of these bat species. Due to the need for tree cutting to accommodate the Project, the Company completed a mist net survey for federal and state-listed bat species in July 2022. On August 15, 2022, the USFWS accepted the survey results and concurred that no Indiana bats or northern long-eared bats were identified in the Project area. Also on August 15, 2022, the DOW concurred that no Indiana bats, northern long-eared bats, little brown bats, or tricolored bats were identified in the Project area. Due to the absence of these listed bat species, they are not likely to be adversely affected by the Project and tree clearing may occur at any time of year.

In addition, ODNR identified one state-endangered mussel: the little spectaclecase (*Villosa lienosa*); three state-endangered fish: the northern brook lamprey (*Icthyomyzon fossor*), Ohio lamprey (*Icthyomyzon bdellium*), and the spotted darter (*Etheostoma maculatum*); and three state-endangered reptiles/amphibians: timber rattlesnake (*Crotalus horridus*), eastern hellbender (*Cryptobranchus alleganiensis*), and eastern spadefoot toad (*Scaphiopus holbrookii*); as well as the state-threatened midland mud salamander (*Pseudotriton montanus diastictus*). However, ODNR concluded that due to the location of the Project and the type of work proposed, the Project is not likely to impact any of these species.

B(10)(f) Areas of Ecological Concern

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

The Company's consultant prepared a Wetland Delineation and Stream Assessment Report, see Appendix D. The ecological survey of the Project identified three wetlands and two streams within the survey corridor. Two wetlands are classified as palustrine unconsolidated bottom (PUB) and one is classified as palustrine scrub-shrub (PSS). One stream is classified as Intermittent (INT) and one stream is classified as Ephemeral (EPH). No temporary or permanent impact to the wetlands are anticipated for the Project.

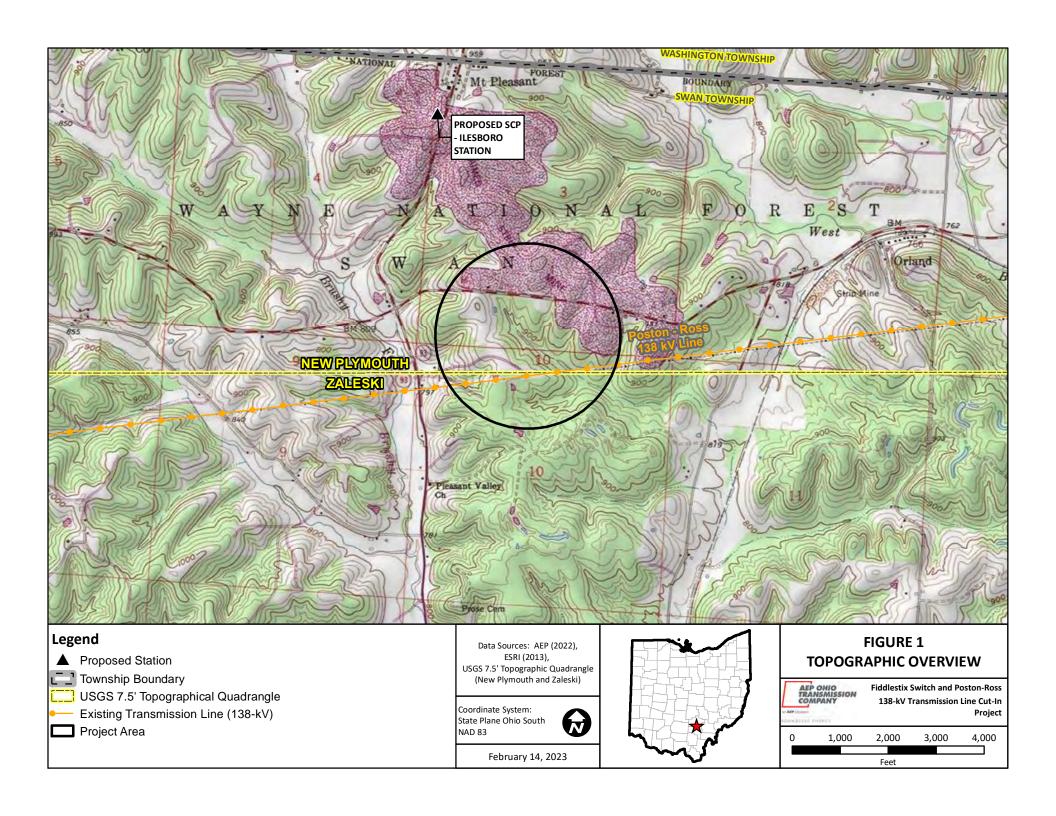
B(10)(g) Unusual Conditions

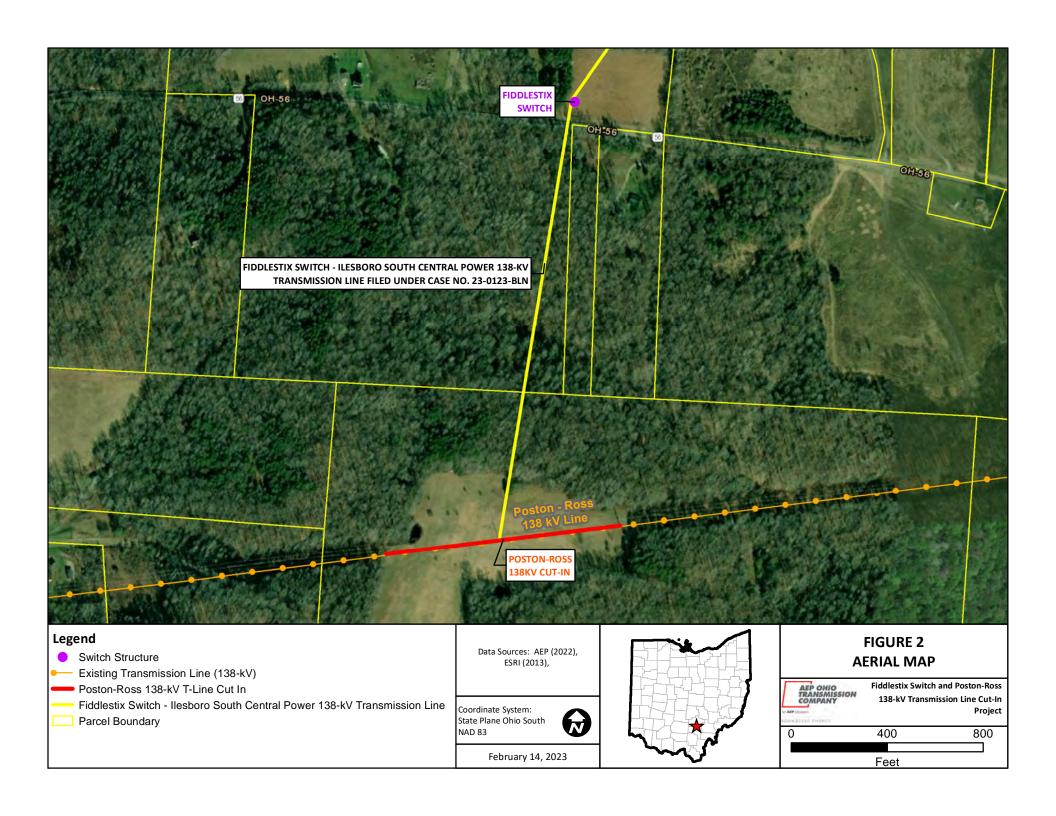
Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

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

Construction Notic	e for Fiddlestix	Switch and P	oston-Ross 1	138-kV/T	ransmission Line	Cut-In Pro	iect
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Appendix A Project Figures





Appendix B PJM Submittal and Long Term Forecast Report

PUCO Form FE-T9: AEP Ohio Specifications of Planned Transmission Lines

1	LINE NAME AND NUMBER:	Fiddlestix Switch - Ilesboro 138kV (s2222 TP2019260)
2	POINTS OF ORIGIN AND TERMINATION	Fiddlestix Switch - Ilesboro INTERMEDIATE STATIONS - N/A
3	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	1.5 mi / 100 ft / 1 circuit
4	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
5	APPLICATION FOR CERTIFICATE:	5/5/2022
6	CONSTRUCTION:	2023 - 2024
7	CAPITAL INVESTMENT:	\$3.3M
8	PLANNED SUBSTATION:	Fiddlestix Switch
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
11	PURPOSE OF THE PLANNED TRANSMISSION LINE	Service to new customer delivery point
12	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	New customer load would not have service in required timeframe
13	MISCELLANEOUS:	



Need Number: AEP-2019-OH044

Process Stage: Solutions Meeting 03/19/2020

Previously Presented:

Need Meeting 7/24/2019

Supplemental Project Driver:

Customer Service

Specific Assumption Reference:

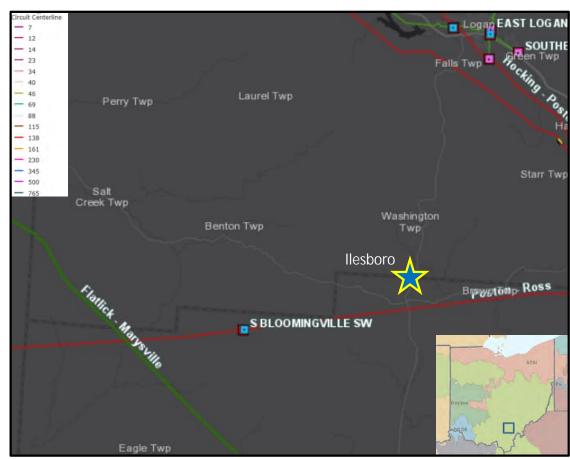
AEP Guidelines for Transmission Owner Identified Needs (AEP

Assumptions slide 7)

Problem Statement:

• South Central Power is requesting a new 138kV delivery point on the Lemaster - Ross 138 kV circuit by September 2020. Anticipated load is about 4 MW.

Model: 2023 Summer RTEP





Need Number: AEP-2019-OH044

Process Stage: Solutions Meeting 03/19/2020

Proposed Solution:

Build a new single circuit 138 kV line (~1.5 mi) to connect the new Ilesboro delivery point to the Lemaster - Ross 138kV circuit using 336.4 ACSR. Estimated Cost: \$4.3M

Install a new 3-way phase over phase 138 kV 2000 A switch (Fiddlestix) with MOABs on the Lemaster – Ross 138kV circuit. Update remote end work at Lemaster. Estimated Cost: \$0.9M

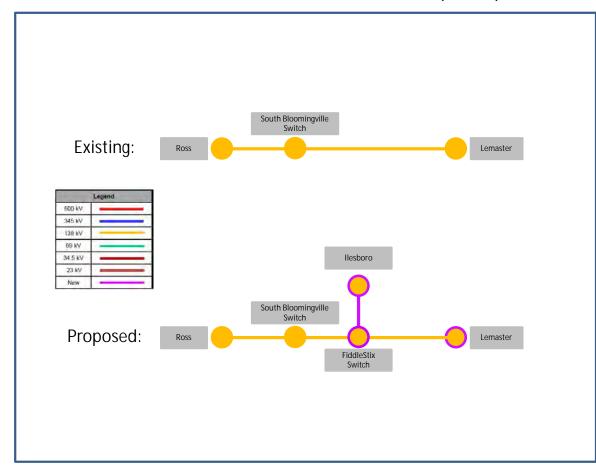
Total Estimated Transmission Cost: \$5.2M

Alternatives Considered:

No viable cost-effective transmission alternative was identified due to the location and timing of the customer request.

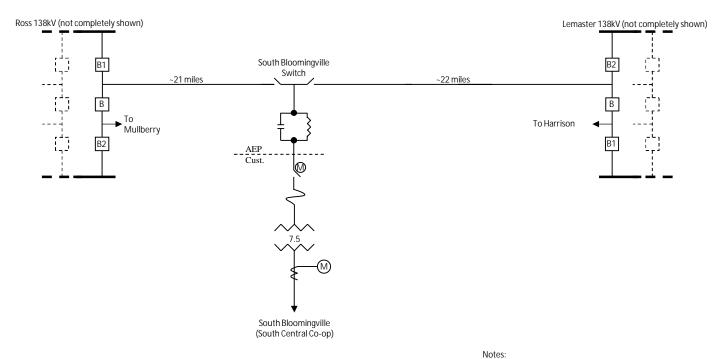
Projected In-Service: 12/01/2022

Project Status: Engineering





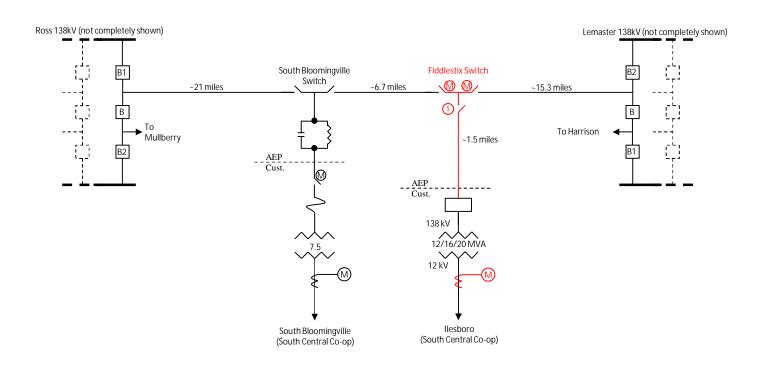




· Point of interconnection is the first AEP structure outside of the customers station fence.







Construction Notic	e for Fiddlestix	Switch and P	oston-Ross 1	138-kV/T	ransmission Line	Cut-In Pro	iect
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Appendix C Agency Coordination

United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services 4625 Morse Road, Suite 104 Columbus, Ohio 43230 (614) 416-8993 / FAX (614) 416-8994



September 21, 2022

Project Code: 2022-0076728

Reference: Fiddlestix Switch - Ilesboro South Central Power 138kV Transmission Line Project, Addendum 2, Vinton County, Ohio

Dear Ms. Apatang,

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

Federally Threatened and Endangered Species: The endangered Indiana bat (Myotis sodalis) and threatened northern long-eared bat (Myotis septentrionalis) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see https://ecos.fws.gov/ecp/species/9045), incidental take of Indiana bats is still prohibited without

a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

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

Sincerely,

Patrice Ashfield Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW Eileen Wyza, ODNR-DOW



Office of Real Estate John Kessler, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229

MARY MERTZ, DIRECTOR

Phone: (614) 265-6621 Fax: (614) 267-4764

September 30, 2022

Hannah Apatang AECOM 525 Vine Street Suite 1800 Cincinnati, OH 45202

Re: 22-0880; Fiddlestix Switch-Ilesboro South Central Power Transmission Line Extension Project

Project: The project proposes to install approximately 1.8 miles of greenfield 138 kV transmission line to tie the new Ilesboro delivery point to the Lemaster-Ross 138kV circuit.

Location: The proposed project is located in Swan Township, Vinton County, Ohio.

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

Natural Heritage Database: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area.

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

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

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species.

During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of little spectaclecase (*Villosa lienosa*), a state endangered mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact this species.

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, the Ohio lamprey (*Ichthyomyzon bdellium*), a state endangered fish, and the spotted darter (*Etheostoma maculatum*), a state endangered fish. The DOW recommends no inwater work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the timber rattlesnake (*Crotalus horridus*), a state endangered species, and a federal species of concern. The timber rattlesnake is a woodland species. In addition to using wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. This long-lived, entirely aquatic salamander inhabits perennial streams with large flat rocks. In-water work in hellbender streams can reduce availability of large cover rocks and can destroy hellbender nests and/or kill adults and juveniles. The contribution of additional sediment to hellbender streams can smother large cover rocks and gravel/cobble substrate (used by juveniles), making them unsuitable for refuge and nesting. Projects that contribute to altered flow regimes (e.g., by increasing areas of impervious surfaces or modifying the floodplain) can also adversely affect

hellbender habitat. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the midland mud salamander (*Pseudotriton montanus diastictus*), a state threatened species. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

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

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

The <u>local floodplain administrator</u> should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew Environmental Services Administrator FW: Bats Study Plan: AEP Fiddlestix

Amy J Toohey <a itoohey@aep.com>

Mon 8/15/2022 1:35 PM

To: Cole A Bachtel <cabachtel@aep.com>;Anderson, Christy <Christy.Anderson@aecom.com> Greetings:

Attached is ODNR's response for a complete set of approvals.

Thanks Amy

From: Eileen.Wyza@dnr.ohio.gov <Eileen.Wyza@dnr.ohio.gov>

Sent: Monday, August 15, 2022 1:31 PM

To: Boyer, Angela <angela boyer@fws.gov>; Natasha Brown <NBrown@envsi.com>

Cc: Amy J Toohey <a jtoohey@aep.com>; Dale W. Sparks <DSparks@envsi.com>; Nathan.Reardon@dnr.ohio.gov

Subject: RE: [EXTERNAL] Bats Study Plan: AEP Fiddlestix

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Natasha,

The Ohio Division of Wildlife (DOW) has received the summer bat survey report for AEP's Fiddlestix Switch-Illesboro South Central 138kV Transmission Line project, conducted according to current U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources, Division of Wildlife guidance. No Indiana (*Myotis sodalis*), northern long-eared (*M. septentrionalis*), little brown (*M.* lucifugus), or tricolored (Perimyotis subflavus) bats were detected, suggesting risk to these stateendangered species is low in the project area and tree cutting during summer maternity season is not likely to result in direct mortality of these species. Please contact DOW immediately should any bats be discovered. Should tree cutting need to occur after March 31, 2027, DOW recommends further consultation to reevaluate risk to these bat species.

This guidance does not constitute a full ODNR environmental review. If required, please contact the ODNR, Office of Real Estate Management to submit a request for agency environmental review coordination.

Thank you,



Eileen Wyza Wildlife Biologist Ohio Division of Wildlife Phone: 614-265-6764

Email: Eileen.Wyza@dnr.ohio.gov

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From: Boyer, Angela angela_boyer@fws.gov> **Sent:** Monday, August 15, 2022 11:30 AM

To: Natasha Brown < NBrown@envsi.com>; Wyza, Eileen < Eileen.Wyza@dnr.ohio.gov>

Cc: Amy J Toohey <a in the content of the content o

<Nathan.Reardon@dnr.ohio.gov>

Subject: Re: [EXTERNAL] Bats Study Plan: AEP Fiddlestix

Hello,

The USFWS response letter is attached.

Sincerely, Angie

From: Natasha Brown < NBrown@envsi.com > Sent: Monday, August 15, 2022 10:16 AM

To: Boyer, Angela <angela boyer@fws.gov>; Wyza, Eileen <<u>Eileen.Wyza@dnr.ohio.gov</u>>

Cc: Amy J Toohey <aitoohey@aep.com>; Dale W. Sparks <<u>DSparks@envsi.com</u>> Subject: RE: [EXTERNAL] Bats Study Plan: AEP Fiddlestix

Greetings,

On behalf of American Electric Power (AEP), ESI is submitting a report summarizing listed bat studies associated with reference number 22-034 (AEP's Fiddlestix Switch-Illesboro South Central 138kV Transmission Line Project in Vinton County, Ohio). Mist netting was completed from 7 through 21 July 2022 and comprised 32 complete and 7 partial net nights of effort. In total, 67 bats were captured including 46 big brown (Eptesicus fuscus) and 21 eastern red (Lasiurus borealis). No protected bats were captured during netting.

The report is too large to send via email and is available through ESI' SharePoint site. The report can be accessed via the below link, please let me know if you are able to access the report:

Final Report

I will be happy to address any questions or comments you may have. Thank you for your time,



Environmental Solutions & Innovations, Inc. 4525 Este Ave. | Cincinnati, OH 45232 | USA office: 513.451.1777 fax: 513.451.3321 NBrown@envsi.com | www.envsi.com

From: Boyer, Angela angela boyer@fws.gov>

Sent: Tuesday, June 28, 2022 3:14 PM

To: Dale W. Sparks < DSparks@envsi.com; Wyza, Eileen < Eileen Eileen Eileen Eileen Eileen.Wyza@dnr.ohio.gov

Cc: Jo Garofalo < JGarofalo@envsi.com >; Amy J Toohey < ajtoohey@aep.com >

Subject: Re: [EXTERNAL] Bats Study Plan: AEP Fiddlestix

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Dale,

This is in response to your June 28, 2022, request for an amendment to Federal Fish and Wildlife Permit Numbers ES02373A-15 (ESI), ES120321-5 (John Timpone), TE56749B-4 (Patrick Moore), TE02167C-0 (James Gore), ES02365A-5 (Lynn Robbins) and ESPER0037601 (Jeremiah Van Deventer) to conduct a summer mist-net survey for AEP's AEP's Fiddlestix Switch-Illesboro South Central 138kV Transmission Line Project in Vinton County, Ohio. This survey effort has been assigned the reference number 22-034. Please include this project reference number in all correspondence to the U.S. Fish and Wildlife Service and the Ohio Division of Wildlife.

This email serves as site-specific authorization to proceed in accordance with your Federal permit requirements. Summer mist netting is authorized to occur between June 1 and August 15, 2022. All federal permittees must also have valid Ohio Scientific Collecting Permits and plans must also be reviewed and approved by the Ohio Division of Wildlife before any surveys take place. Please note that a federally permitted person must remain present at the mist net sites while they are being operated. This notification serves as written concurrence that Environmental Solutions and Innovations, John Timpone, Patrick Moore, James Gore, Lynn Robbins, and Jeremiah Van Deventer are authorized to proceed with the proposed bat survey. This survey serve as a presence/absence survey for the Indiana bat and northern long-eared bat.

By January 31, 2023, we request that you submit an annual report of your Ohio survey work to this office using the 2022 Midwestern U.S. Spreadsheet in electronic format. Be sure to include data for all sites even if no bats were detected.

Sincerely, Angela Boyer **Endangered Species Coordinator for Ohio** U.S. Fish and Wildlife Service 4625 Morse Road, Suite 104 Columbus, Ohio 43230

From: Dale W. Sparks < DSparks@envsi.com> **Sent:** Tuesday, June 28, 2022 10:34 AM

To: Wyza, Eileen < Eileen < Eileen < Eileen < Eileen.Wyza@dnr.ohio.gov>; Boyer, Angela angela_boyer@fws.gov>

Cc: Jo Garofalo < JGarofalo@envsi.com >; Amy J Toohey < ajtoohey@aep.com >

Subject: [EXTERNAL] Bats Study Plan: AEP Fiddlestix

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Please find attached a study plan for AEP's Fiddlestix Switch to Illesboro South Transmission Line Project.

ESI's intent is to complete netting along the length of the project with a targeted start-date of 10 July.



Environmental Solutions & Innovations, Inc. 4525 Este Avenue | Cincinnati, OH 45232 | USA t: 513.451.1777 f: 513.451.3321 c: 513.503.2667

dsparks@envsi.com | www.envsi.com

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United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services 4625 Morse Road, Suite 104 Columbus, Ohio 43230 (614) 416-8993 / FAX (614) 416-8994



August 15, 2022

TAILS#: 03E15000-2021-TA-0064

Dear Ms. Brown:

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

We have received your summer bat survey report for the subject project. The survey was conducted following current Service guidelines. No Indiana bats (*Myotis sodalis*) were captured/detected, demonstrating probable absence of Indiana bats in the project area. Currently, the Service has no known hibernacula or maternity roost records for northern long-eared bat (*Myotis septentrionalis*) in the vicinity of the project. Therefore, the 4(d) rule for the northern long-eared bat could be applied (see: https://ecos.fws.gov/ecp/species/9045). Tree clearing on the project site at any time of the year is unlikely to result in adverse impacts to Indiana bats and will not result in any unauthorized incidental take of northern long-eared bats. Negative Indiana bat summer surveys are valid for five years. Therefore, no tree clearing should occur on the site after March 31, 2027 without further coordination with this office.

<u>Section 7 Coordination</u>: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant

species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

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

Sincerely,

Patrice Ashfield Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW Eileen Wyza, ODNR-DOW



In reply, refer to 2020-VIN-49796

November 20, 2020

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

RE: Fiddlestix Switch-Ilesboro South Central Power 138kV New Build Project, Swan Township, Vinton County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on October 22, 2020 regarding the proposed Fiddlestix Switch-Ilesboro South Central Power 138kV New Build Project in Swan Township, Vinton County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Archaeological Investigations for the 2.4 km (1.5 mi) Fiddlestix Switch-Ilesboro South Central Power 138kV New Build Project in Swan Township, Vinton County, Ohio* by Ryan J. Weller (Weller & Associates, Inc., 2020).

A literature review, visual inspection, and shovel test unit excavation was completed as part of the investigations. No previously identified archaeological sites are located within the project area and no new archaeological sites were identified during survey. Our office agrees no further archaeological survey is necessary.

The following comments pertain to the *History/Architecture Investigations for the for the 2.4 km (1.5 mi) Fiddlestix Switch-Ilesboro South Central Power 138kV New Build Project in Swan Township, Vinton County, Ohio* by Austin White (Weller & Associates, Inc., 2020).

A literature review and field survey were completed as part of the investigations. A total of sixteen (16) resources fifty years of age or older were identified within the Area of Potential Effects (APE) during the field survey. It is Weller's recommendation that the identified properties are not eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with Weller's recommendations regarding eligibility.

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

Sincerely,

Krista Horrocks, Project Reviews Manager

Resource Protection and Review

RPR Serial No: 1086003-1086004

Appendix D Wetland Delineation and Stream Assessment Report

FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138KV TRANSMISSION LINE VINTON COUNTY, OHIO WETLAND DELINEATION AND STREAM ASSESSMENT REPORT

Prepared for:

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



Prepared by:

A=COM

525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Project #: 60624128

February 2021 Revised March 2022



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1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing to install approximately 1.8 miles of greenfield 138 kV transmission line in Vinton County, Ohio (Project). The greenfield route is to tie the new Ilesboro delivery point to the Lemaster-Ross 138kV circuit. Approximately 0.01 mile of 138 kV line on the existing Poston-Ross 138 kV Transmission Line is also included in the Project. The proposed Project is illustrated on **Figure 1**.

The purpose of the field survey was to assess the presence of wetlands and other Waters of the United States (WOTUS) within the Project. The Project consists of a 200-foot (ft) wide corridor (Project survey corridor) along the proposed 1.8-mile Ilesboro 138 kV transmission line, totaling approximately 45 acres in area. In addition to identifying the presence of wetlands and other WOTUS within the Project survey corridor, land uses were recorded to classify and characterize potential habitat for rare, threatened, and endangered species. This report will be used to assist AEP's efforts to identify potential WOTUS and rare, threatened and endangered species habitat present within the Project survey corridor to avoid and/or minimize impacts to those resources during construction activities. This report was revised in February 2022 to provide more accurate and updated stream and wetland classifications and categorizations since the vacatur of the EPA's 2020 Clean Water Act Section 401 Certification Rule (2020 Rule) on October 21, 2021.

2.0 METHODOLOGY

Prior to conducting field surveys, digital USDA NRCS soil surveys, USFWS NWI maps, USGS NHD, and USGS 7.5-minute topographic maps were reviewed to identify the occurrence and location of potential wetlands and streams within the Project survey corridor. ODNR Division of Mineral Resources and Geological Survey (DMRGS) data was reviewed to identify potential winter hibernacula for the Indiana and northern long-eared bats and information regarding these findings is provided in Appendix G.

Field survey activities included recording the physical boundaries of observed water features using submeter capable EOS GNSS receivers in conjunction with ArcCollector application on iPad tablets. The GNSS data were imported into ArcMap GIS software, where it was reviewed, edited for accuracy, and compiled in a format suitable for transfer and use by AEP. Water features were delineated and assessed based upon the appropriate procedures detailed below. Land uses observed within the Project survey corridor were assigned a general classification based upon the principal land characteristics and vegetation cover of the location.

2.1 WETLAND DELINEATION

The Project survey corridor was evaluated according to the procedures outlined in the USACE 1987 Wetland Delineation Manual (1987 Manual) (Environmental Laboratory, 1987 Manual) and the Regional



Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0) (EMP Regional Supplement) (USACE, 2012). The 1987 Manual and Regional Supplement define wetlands as areas that have positive evidence of three environmental parameters: hydric soils, wetland hydrology, and hydrophytic vegetation. Wetland boundaries are placed where one or more of these parameters give way to upland characteristics.

AECOM utilized the routine delineation method described in the 1987 Manual and EMP Regional Supplement that consisted of a pedestrian site reconnaissance, including identifying the vegetation communities, soils identification, a geomorphologic assessment of hydrology, and notation of disturbance. The methodology used to examine each parameter is described in the following sections.

2.1.1 **SOILS**

Soils were examined for hydric soil characteristics using a spade shovel to extract soil samples. A *Munsell Soil Color Chart* (Kollmorgen Corporation, 2010) was used to identify the hue, value, and chroma of the matrix and mottles of the soils. Generally, mottled soils with a matrix chroma of two or less, or unmottled soils with a matrix chroma of one or less are considered to exhibit hydric soil characteristics (Environmental Laboratory, 1987). In sandy soils, mottled soils with a matrix chroma of three or less, or unmottled soils with a matrix chroma of two or less are considered to be hydric soils.

2.1.2 HYDROLOGY

The 1987 Manual requires that an area be inundated or saturated to the surface for an absolute minimum of five percent of the growing season (areas saturated between 5% and 12.5% of the growing season may or may not be wetlands, while areas saturated over 12.5% of the growing season fulfill the hydrology requirements for wetlands). The Regional Supplement states that the growing season dates are determined through onsite observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature (12-inch depth) is 41 degrees Fahrenheit (°F) or higher as an indicator of soil microbial activity. Therefore, the beginning of the growing season in a given year is indicated by whichever condition occurs earlier, and the end of the growing season by whichever persists later.

The Regional Supplement also states that if onsite data gathering is not practical, the growing season can be approximated by the number of days between the average (5 of 10 years, or 50% probability of recurrence) date of the last and first 28° F air temperature in the spring and fall, respectively. The National Weather Service WETS data obtained from the NRCS National Water and Climate Center reveals for Vinton County that past recorded data is insufficient for calculating the growing season. As such, the growing season information for the neighboring Jackson County was obtained. The National Weather Service WETS data reveals for Jackson County that in an average year, this period lasts from April 19 to October 21, or 185 days. In the Project area, five percent of the growing season equates to approximately nine days.



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

2.1.3 VEGETATION

Dominant vegetation was visually assessed for each stratum (tree, sapling/shrub, herb and woody vine) and an indicator status of obligate wetland (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and/or upland (UPL) was assigned to each plant species based on the U.S. Army Corps of Engineers 2016 National Wetland Plant List: Eastern Mountains and Piedmont Region (Lichvar, et al, 2016), which encompasses the area of the Project. An area is determined to have hydrophytic vegetation when, under normal circumstances, 50 percent or more of the composition of the dominant species are OBL, FACW and/or FAC species. Vegetation of an area was determined to be non-hydrophytic when more than 50 percent of the composition of the dominant species was FACU and/or UPL species. In addition to the dominance test, the FAC-neutral test and prevalence tests are used to determine if a wetland has a predominance of hydrophytic vegetation. USACE guidance indicates that to the extent possible, the hydrophytic vegetation decision should be based on the plant community that is normally present during the wet portion of the growing season in a normal rainfall year (USACE, 2012).

2.1.4 WETLAND CLASSIFICATIONS

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

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

PSS – Palustrine scrub/shrub wetlands are characterized by woody vegetation that is less than three inches diameter at breast height (DBH), and greater than 3.28 feet tall. The woody angiosperms (i.e. small trees



or shrubs) in this broad-leaved deciduous community have relatively wide, flat leaves that are shed annually during the cold or dry season.

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

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

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

2.1.5 OHIO RAPID ASSESSMENT METHOD v. 5.0

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

Category 1 Wetlands

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



Category 2 Wetlands

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

Category 3 Wetlands

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

2.2 STREAM ASSESSMENT

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

Stream assessments were conducted using the methods described in the OEPA's Methods for Assessing Habitat in Flowing Waters: Using OEPA's Qualitative Habitat Evaluation Index (Rankin, 2006) and in the OEPA's Field Methods for Evaluating Primary Headwater Streams in Ohio (OEPA, 2018). Streams assessed in the Project survey corridor were reviewed for existing OEPA Aquatic Life Use Designations per OEPA's Water Quality Standards (OAC Chapter 3745-1). Those without an existing use designation were assigned a provisional aquatic life use designation based upon habitat assessment results (Rankin,



1989). Flow regime (ephemeral, intermittent, perennial) was determined by the appropriate stream assessment score per OEPA manuals (OEPA, 2018) and by AECOM's professional judgement.

Due to the vacatur of the EPA's 2020 Clean Water Act Section 401 Certification Rule (2020 Rule) on October 21, 2021, the preliminary determinations of jurisdictional status for some previously delineated streams and wetlands have been updated. These changes and others, such as changes in classification where applicable, are discussed in detail in this report.

2.2.1 OEPA QUALITATIVE HABITAT EVALUATION INDEX

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

The QHEI method is generally considered appropriate for waterbodies with drainage basins greater than one square mile, if natural pools are greater than 15.7 inches, or if the water feature is shown as blue-line waterways on USGS 7.5-minute topographic quadrangle maps. In order to convey general stream habitat quality to the regulated public, the OEPA has assigned narrative ratings to QHEI scores. The ranges vary slightly for headwater streams (H are those with a watershed area less than or equal to 20 square miles) versus larger streams (L are those with a watershed area greater than 20 square miles). The Narrative Rating System includes: Very Poor (<30 H and L), Poor (30 to 42 H, 30 to 44 L), Fair (43 to 54 H, 45 to 59 L), Good (55 to 69 H, 60 to 74 L) and Excellent (70+ H, 75+ L).

2.2.2 OEPA PRIMARY HEADWATER HABITAT EVALUATION INDEX

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



and bank, with either continuous or periodically flowing water, with watershed area less than or equal to 1.0 square mile, and a maximum depth of water pools equal to or less than 15.75 inches" (OEPA, 2018). Pool depth and water volume of headwater streams are normally insufficient to fully support the biological criteria associated with other sub-categories of aquatic life described OAC 3745-1-07.

Headwater streams are scored based on channel substrate composition, bankfull width, and maximum pool depth. Assessment results in a score (0 to 100) that is converted to a specific PHW stream type. Streams that are scored from 0 to 29 are typically identified as "Class I PHW streams", 30 to 70 are "Class II PHW streams", and 71 to 100 are "Class III streams". Technically, a stream can score relatively high, but actually belong in a lower class, and vice-versa. A decision-making flow chart was used to determine appropriate PHW stream classifications per OEPA Guidelines (OEPA, 2018). Evidence of anthropogenic alterations to the natural channel will result in a "Modified" qualifier for the stream type.

Class I PHW Streams: Class I PHW Streams are those that have "normally dry channels with little or no aquatic life present" (OEPA, 2018). These waterways are usually ephemeral, with water present for short periods of time due to infiltration from snowmelts or rainwater runoff.

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

Class III PHW Streams: Class III PHW Streams usually have perennial water flow with cool-cold water adapted native fauna. Class III PHW streams are comprised of vertebrates (either cold water adapted species of headwater fish and or obligate aquatic species of salamanders, with larval stages present), and/or a diverse community of benthic cool water adapted macroinvertebrates present in the stream continuously (on an annual basis).

2.2.3 OEPA 401 WATER QUALITY CERTIFICATION FOR NATIONWIDE PERMIT ELIGIBILITY

The OEPA has designated each watershed in the state on the basis of whether it may be ineligible for coverage under Ohio EPA's 401 Water Quality Certification for Nationwide Permits. Mapping provided by OEPA illustrate the eligibility of streams in the area for a nationwide 401 permit. Three categories are identified as eligible, ineligible, and possibly eligible with additional field screening required. Impacts to streams within each watershed would then have eligibility for 401 Water Quality Certification determined by the watershed category. Figure 4 shows the category of each watershed in the Project area. The three categories are defined as:



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

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

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

2.2.4 UPLAND DRAINAGE FEATURE

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

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

2.3 RARE, THREATENED, AND ENDANGERED SPECIES

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



as the United States Fish and Wildlife Service (USFWS) in August 2020 soliciting comments on the proposed Project. Agency-identified species of concern and available species-specific information was reviewed to identify the various habitat types that listed species are known to inhabit.

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

AECOM reviewed publicly available data to identify underground voids which could be potential hibernation sites for overwintering bats (hibernacula). AECOM compared the Project area and 0.25-mile buffer to the information provided by ODNR Division of Mineral Resources and Division of Geological Survey resources on known mining activity and karst geology in Vinton County and reviewed them for indications of likely underground voids. This desktop assessment for winter bat habitat is located in Appendix G.

3.0 RESULTS

In September and October 2020, AECOM ecologists walked the Project survey corridor to conduct the wetland delineation, stream assessment and habitat survey. Within the Project survey corridor, AECOM delineated four wetlands, four streams, and no ponds. The delineated features are discussed in detail in the following sections.

3.1 WETLAND DELINEATION

3.1.1 Preliminary Soils Evaluation

Soils were observed and documented as part of the delineation methodology. According to the USDA/NRCS Web Soil Survey of Vinton County, Ohio, and the NRCS Hydric Soils Lists of Ohio, seven soil map units of three soil series are mapped within the Project survey corridor (USDA NRCS, 2020). Of these soil map units, none are identified as hydric. Table 1 provides a detailed overview of all soil series and soil map units within the Project survey corridor. Soil map units located within the Project survey corridor are shown on Figure 2.

TABLE 1: SOIL MAP UNITS AND DESCRIPTION WITHIN THE FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138KV TRANSMISSION LINE PROJECT SURVEY CORRIDOR

Soil Series	Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
	Bhs4D	Bethesda channery silt loam, 8 to 25 percent slopes, unreclaimed	spoil piles on ridges on hills	No	NA
Bethesda	Bhs4F	Bethesda channery silt loam, 25 to 70 percent slopes, unreclaimed	spoil piles on ridges on hills	No	NA
	Bhv1B	Bethesda silt loam, 0 to 8 percent slopes, reclaimed	reclaimed lands on ridges on hills	No	NA



Soil Series	Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
	Bhv1D	Bethesda silt loam, 8 to 25 percent slopes, reclaimed			NA
Wellston	WbC	Wellston silt loam, 8 to 15 percent slopes	ridges on uplands	No	NA
Wharton-	WhL1D1	Wharton-Latham silt loams, 15 to 25 percent slopes	hills on hills	No	NA
Latham	WhL1E1	Wharton-Latham silt loams, 25 to 40 percent slopes	hills on hills	No	NA

USDA, NRCS. Soil Survey Geographic (SSURGO) Database. Available online at:

https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed October 21, 2020.

USDA, NRCS. National Hydric Soils List by State. Available online at:

http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed October 21, 2020

3.1.2 National Wetland Inventory Map Review

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

Two mapped NWI wetlands are located within the Project survey corridor. These NWI wetlands are described below in Table 2 and illustrated on Figure 2:

TABLE 2: NWI DISPOSITION SUMMARY TABLE WITHIN THE FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138KV TRANSMISSION LINE PROJECT SURVEY CORRIDOR

NWI Code	NWI Description	Figure 2	Related Field Inventoried Resource (Wetland ID/Stream ID)	Comments
PFO1C	Palustrine, Forested, broad-leaved deciduous, seasonally flooded	2D	Wetland 03	Wetland extends outside Project survey corridor
R4SBC	Riverine, Intermittent, Stream Bed, Seasonally Flooded	2C	Stream 03	Stream extends outside Project survey corridor

3.1.3 Delineated Wetlands

During the field survey, AECOM identified four wetlands – totaling approximately 0.7 acres – within the Project survey corridor. A summary of these delineated wetlands is listed in **Appendix A** and **Table 3**.



AECOM provided a preliminary classification of jurisdictional status for each wetland based upon the Clean Water Act after the 2020 Navigable Waters Rule vacatur. Three wetlands (Wetland 02, Wetland 03 and Wetland 04) are considered not isolated and therefore, WOTUS. Final jurisdictional status can only be determined by the USACE.

The locations and approximate extent of the wetlands identified within the Project survey corridor are shown on Figure 2 and Figure 3. Completed USACE and ORAM wetland delineation forms are provided in **Appendix B**. Color photographs taken of the wetlands are provided in **Appendix B**.

3.1.4 Delineated Wetlands ORAM Results

Category 1 Wetlands

No Category 1 wetlands were delineated within the Project survey area.

Category 2 Wetlands

Four (4) Category 2 wetlands were delineated within the Project survey corridor. Three wetlands are PEM habitat and one consisted of PFO habitat. The wetlands exhibited very narrow to wide upland buffers, very low to high intensive surrounding land use (e.g. row cropping and 2nd growth or older forest), no percentage of invasive species, and exhibited recovered modifications to natural hydrologic regime. Substrate disturbances and habitat alteration were observed to be recovering to recovered from recent manipulation due to mowing and selective cutting.

One wetland (Wetland 03) was originally assessed and presumed to be a category 3, but after reviewing historical topographic data the wetland was determined to be a category 2 based on historical mining in the area.

Category 3 Wetlands

No Category 3 wetlands were delineated within the Project survey area.

TABLE 3: DELINEATED WETLANDS SUMMARIZED BY COWARDIN AND ORAM TYPE WITHIN THE FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138 KV TRANSMISSION LINE PROJECT SURVEY CORRIDOR

Cowardin Wetland Type ^a	ORAM Category 1	ORAM Modified Category 2	ORAM Category 2	ORAM Category 3	Number of Wetlands	Acreage within Project Survey Corridor	Wetland Name and Length Crossed by Centerline (feet)
PEM	0	0	3	0	3	0.4	Wetland 04 40 ft
PFO	0	0	1	0	1	0.3	Wetland 03 80 ft



Cowardin Wetland Type ^a	ORAM Category 1	ORAM Modified Category 2	ORAM Category 2	ORAM Category 3	Number of Wetlands	Acreage within Project Survey Corridor	Wetland Name and Length Crossed by Centerline (feet)
Acreage per ORAM Category	0	0	0.7	0	NA	NA	NA
Total	0	0	4	1	4	0.7	120

Cowardin Wetland Type^a: PEM = palustrine emergent; PFO = palustrine forested

3.2 STREAM CROSSINGS

AECOM identified four streams, totaling 655 linear feet, within the Project survey corridor, as listed in **Appendix C**. The streams are comprised of one ephemeral stream and three perennial streams. The locations of the streams identified within the Project survey corridor are shown on **Figure 3**.

HHEI evaluations were conducted on all four streams. These streams were identified using USGS topographic maps, aerial photography, and field reconnaissance.

AECOM has preliminarily determined that the assessed streams (Streams 01-04) within the Project survey corridor appear to be jurisdictional (i.e., WOTUS.), based on the Clean Water Act after the 2020 Water Rule vacatur. Final jurisdictional status of the identified waterbodies can only be determined by the USACE.

3.2.1 Qualitative Habitat Evaluation Index

No streams within the Project survey corridor were assessed with the QHEI methodology.

3.2.2 Primary Headwater Habitat Evaluation Index

One ephemeral and three perennial headwater streams, totaling 655 linear feet, were identified within the Project survey corridor. These streams included one Modified Class I PHW stream, and three Class III PHW streams. Completed HHEI forms for each stream and photographs taken during the field survey are provided in **Appendix D**.

Class III Primary Headwater Streams – Three Class III PHW Streams, totaling approximately 573 feet, with scores ranging from 71 to 77, were identified during the field investigations. The substrates of the streams primarily consisted of gravel, sand, and bedrock, with smaller amounts of boulder, boulder slabs, cobble, fine detritus material, leaf pack/woody debris, and silt. The maximum pool depths of the streams ranged from 9 inches to 18 inches and the average bankfull widths ranged from 7.1 feet to 16 feet. Stream 03 had overall moderately stable stability of both stream banks while Stream 02 and Stream 04 had overall stable stability of both stream banks.

Modified Class I Primary Headwater Stream – One Modified Class I PHW Stream, totaling approximately 82 linear feet, with a score of 27, was identified during the field investigations. The substrates of the stream



primarily consisted of silt, and sand, with smaller amounts of leaf pack/woody debris. The maximum pool depth of the stream was zero inches and the average bankfull width was 3.5 feet. Both stream banks appeared to be stable. The stream showed evidence of stream channel modification (e.g. channelization, culverting, etc.), which resulted in the stream receiving a Modified Class I PHW Stream designation.

3.2.3 OEPA STREAM ELIGIBILITY

OEPA stream eligibility for 401 Water Quality Certification mapping was reviewed for the field identified streams. The Project survey corridor occurs in two watersheds designated by 401 WQC eligibility and are listed in **Table 4**. Both watersheds are designated "Eligible". OEPA stream eligibility mapping for the Project vicinity, with field identified streams, is provided on Figure 4.

TABLE 4
SUMMARY OF WATERSHED 401 WQC ELIGIBILITY WITHIN THE FIDDLESTIX SWITCH-ILESBORO SOUTH
CENTRAL POWER 138 KV TRANSMISSION LINE PROJECT SURVEY CORRIDOR

HUC-12	Watershed	401 WQC Eligibility	Number of Streams Delineated
050901010202	West Branch Racoon Creek	Eligible	4
050901010203	Brushy Fork	Eligible	0
		Total	4

3.3 PONDS

No ponds were identified within the Project survey corridor during the survey.

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 September and October 2020. Portions of the Project survey corridor were identified as grassland, hay field/pasture, landscaped areas, old field, mixed mesophytic forest, scrub-shrub, streams/wetlands, and urban areas. Habitat descriptions, applicable to the Project, and details on the expected impacts of construction are provided below in **Table 5**. Vegetated land cover can be seen visually from aerial photography provided on **Figure 5**. Color photographs of habitat types observed within the Project survey corridor are included in **Appendix E**.



TABLE 5 VEGETATIVE COMMUNITIES WITHIN THE FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138 KV TRANSMISSION LINE PROJECT SURVEY CORRIDOR

Vegetative Community	Description	Approximate Acreage Within the Project Survey Corridor	Approximate Percentage Within the Project Survey Corridor
Grassland	Grassland fields were observed in various portions of the Project corridor. These areas within the corridor and in adjacent areas border agricultural and residential properties and consist of seldomly disturbed upland grasses and lowlying forbs such as little bluestem (Schizachyrium scoparium), broomsedge (Andropogon virginicus), yellow foxtail (Setaria pumila), red clover (Trifolium pratense), wild carot (Daucus carota), and goldenrod (Solidago altissima).	5.3	11.9%
Hay Field/Pasture	Cattle and/or horse pasture, and hay fields were observed in various portions of the Project corridor. These areas within the corridor and in adjacent areas consist of seasonally mowed and grazed areas of grass and forbs.	4.7	10.5%
Landscaped Areas	Landscaped areas (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.	5.7	12.7%
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey corridor of the Project in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old-field areas within the study corridors and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs.	12.5	28%
Scrub-Shrub	Scrub-shrub habitats represent the successional stage between old-field and second growth forest, and often emerge in recently harvested forests responding to the lightness of the remaining canopy. Dominant species consist of herbaceous communities similar to that of old field habitat with a few woody species, to a community dominated by forest herbs and woody species.	2.6	5.8%
Streams/Wetlands	Streams and wetlands were observed both within and beyond the survey corridor for the Project.	1.8	4%
Mixed Mesophytic Forest	Mixed mesophytic forests are present along the Project survey corridor. Woody species dominating these areas included tulip poplar (<i>Liriodendron tulipifera</i>), sugar maple (<i>Acer saccharum</i>), black walnut (<i>Julans nigra</i>), white oak (<i>Quercus alba</i>), silver maple (<i>Acer saccharinum</i>), and mockernut hickory (<i>Carya tomentosa</i>). The dominant shrub-layer species included mockernut hickory, sugar maple, tulip poplar, black cherry (Prunus serotina), American beech (<i>Fagus grandifolia</i>), and American hornbeam (<i>Carpinus caroliniana</i>).	11.8	26.4%
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.	0.3	0.7%
Totals:		44.7	100



3.5 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation -

AECOM conducted a survey for potential rare, threatened and endangered species habitat within the Project survey corridor. A summary of the agency coordination responses is provided below. Correspondence letters from the USFWS and ODNR are included as **Appendix F**. **Table 6** provides a list of federal and state-listed threatened and endangered species identified as possibly occurring within or near the Project during the rare, threatened, and endangered species review.



Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Indiana bat (<i>Myotis</i> sodalis)	Endangered	Endangered	Winter Indiana bat hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8-to 10-inch diameter size classes of several species of hickory (<i>Carya</i> spp.), oak (<i>Quercus</i> spp.), ash (<i>Fraxinus</i> spp.), birch (<i>Betula</i> spp.), and elm (<i>Ulmus</i> spp.) have been found to be utilized by the Indiana bat. These tree species and many others may be used when dead if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low-density sub-canopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey.	Yes-Within the Project survey corridor, wooded areas were identified within Wayne National Forest, which present potentially suitable summer roosting habitat. No winter hibernacula were identified within 0.25 mile of the Project.	ODNR-DOW commented that the Project is located within the Indiana bat's range. If trees must be cut, ODNR-DOW recommends implementing seasonal tree cutting (October 1 through March 31), and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. If implementation of seasonal cutting is not feasible, ODNR-DOW recommends conducting a mist net survey or acoustic survey from June 1 to August 15, prior to any cutting. USFWS commented that the Indiana bat occurs throughout the State of Ohio and removal of trees ≥3 inches dbh is recommended to be avoided wherever possible. USFWS commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31 to avoid impacts to Indiana bats.	Potential suitable habitat (woodlands) was observed within the Project survey corridor. If tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.



Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Northern long-eared bat (<i>Myotis</i> septentrionalis)	Threatened	Threatened	Winter hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (<i>Carya</i> spp.), oak (<i>Quercus</i> spp.), ash (<i>Fraxinus</i> spp.), birch (<i>Betula</i> spp.), and elm (<i>Ulmus</i> spp.) have been found to be utilized by this species. These tree species and many others may be used when dead if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low-density sub-canopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey. Proximity to water is critical because insect prey density is greater over or near open water. This species has also been found, albeit rarely, roosting in structures like barns and sheds.	Yes-Within the Project survey corridor, wooded areas with adjacent waterbodies were identified within Wayne National Forest, which present potentially suitable summer roosting habitat. No winter hibernacula were identified within 0.25 mile of the Project.	ODNR-DOW commented that the Project is located within the northern long-eared bat's range. If trees must be cut, ODNR-DOW recommends implementing seasonal tree cutting (October 1 through March 31), and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. If implementation of seasonal cutting is not feasible, ODNR-DOW recommends conducting a mist net survey or acoustic survey from June 1 to August 15, prior to any cutting. USFWS commented that the Northern long-eared bat occurs throughout the State of Ohio and removal of trees ≥3 inches dbh is recommended to be avoided wherever possible. USFWS commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.	Potentially suitable habitat (woodlands) was observed within the Project survey corridor. If tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.



Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Little brown bat (<i>Myotis lucifugus</i>)	Endangered	Threatened	Little brown bats are habitat generalists, using most cover types available to them in a variety of ecosystems. Much of their foraging activity is associated with aquatic habitats, so lakes and streams play a significant factor in habitat use.	Yes-Within the Project survey corridor, wooded areas with adjacent waterbodies were identified within Wayne National Forest, which present potentially suitable summer roosting habitat. o winter hibernacula were identified within 0.25 mile of the Project.	ODNR-DOW commented that the Project is located within the little brown bat's range. If trees must be cut, ODNR-DOW recommends implementing seasonally tree cutting (October 1 through March 31), and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. If implementation of seasonal cutting is not feasible, ODNR-DOW recommends conducting a mist net survey or acoustic survey from June 1 to August 15, prior to any cutting. USFWS did not comment on this species.	Potentially suitable habitat (woodlands) was observed within the Project survey corridor. If tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.
Tricolored bat (Perimyotis subflavus)	Endangered	None	Tricolored bats are associated with forested landscapes, often in open woods. They can also be found over water and adjacent water edges. Tricolored bats commonly roost among the leaves or needles of live or dead trees but will also use buildings. The bats hibernate in caves, mines, and rock outcroppings.	Yes-Within the Project survey corridor, wooded areas with adjacent waterbodies were identified within Wayne National Forest, which present potentially suitable summer roosting habitat. No winter hibernacula were identified within 0.25 mile of the Project.	ODNR-DOW commented that the Project is located within the tricolored bat's range. If trees must be cut, ODNR-DOW recommends implementing seasonally tree cutting (October 1 through March 31), and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. If implementation of seasonal cutting is not feasible, ODNR-DOW recommends conducting a mist net survey or acoustic survey from June 1 to August 15, prior to any cutting. USFWS did not comment on this species.	Potentially suitable habitat (woodlands) was observed within the Project survey corridor. If tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.



OBINITA		55	WITHIN THE FIDDLESTIX SWITCH-LESBORO	COOTH OLIVINAL I	THE THE PROPERTY OF THE PROPER	
Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Reptiles						
Timber rattlesnake (Crotalus horridus)	Endangered	Species of Concern	In addition to wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW indicated that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species.	ODNR determined that this project is not likely to impact this species.
Fish						
Northern brook lamprey (Ichthyomyzon fassor)	Endangered	None	The northern brook lamprey inhabits clean headwater areas of creeks and small rivers with coarse gravel to rock bottoms located in once glaciated terrain.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW recommends no inwater work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no inwater work is proposed in a perennial stream, the Project is not likely to impact the species.	No potentially suitable habitat was observed within the Project survey corridor. No in- water work is proposed for the Project
Ohio lamprey (<i>lchthyomyzon</i> bdellium)	Endangered	None	The Ohio lamprey inhabits warmwater habitats in the Ohio River basin, including the Allegheny, Wabash, and Upper Tennessee drainages. Depending on the life cycle period, this species either inhabits slow areas with soft substrates and high detrital content, medium to large river systems, or runs and riffles of clean gravel/cobble in smaller streams and rivers.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW recommends no inwater work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no inwater work is proposed in a perennial stream, the Project is not likely to impact the species.	No potentially suitable habitat was observed within the Project survey corridor. No in- water work is proposed for the Project
Spotted darter (Etheostoma maculatum)	Endangered	None	This species requires large unpolluted streams, spending most of its time in deep riffles, or pools just downstream, where a gravel-rubble bottom predominates, and bottom current velocity is low.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW recommends no inwater work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no inwater work is proposed in a perennial stream, the Project is not likely to impact the species.	No potentially suitable habitat was observed within the Project survey corridor. No in- water work is proposed for the Project
Tippecanoe darter (Etheostoma tippecanoe)	Threatened	None	This little darter prefers riffle areas four to 20 inches deep, in clean rivers and large creeks with a bottom of pea-sized, clean gravel and a high bottom current velocity	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW recommends no inwater work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no inwater work is proposed in a perennial stream, the Project is not likely to impact the species.	No potentially suitable habitat was observed within the Project survey corridor. No in- water work is proposed for the Project



ODINK A	NI OSI WS ER	JIED SPECIE	S WITHIN THE FIDDLESTIX SWITCH-ILESBORO	JOUTH CENTRAL P	TANSMISSION LINE	- FROJECT
Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Bivalves						
Little spectaclecase (Villosa lienosa)	Endangered	None	This species lives in sandy substrates in slight to moderate current. The mussel prefers mud and typically inhabits small creeks to mediumsized rivers with perennial flow regimes, usually along the banks in slower currents.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW comments that due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species.	No potentially suitable habitat was observed within the Project survey corridor. No in- water work is proposed for the Project
Birds						
Northern harrier (Circus hudsonis)	Endangered	None	This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands.	Yes- undulating grasslands were identified within the Project survey corridor, which present potentially suitable habitat.	ODNR-DOW recommends that construction should be avoided within the grassland habitat during the species' nesting period of May 15 to August 1. If this type of habitat will not be impacted, the Project is not likely to impact this species.	Potentially suitable habitat (grasslands) were observed within the Project survey corridor. It is recommended that construction within this habitat takes place outside of the bird's nesting period (May 15 to August 1).
Amphibians						
Eastern hellbender (Cryptobranchus alleganiensis)	Endangered	Species of Concern	The eastern hellbender's habitat consists on shallow, fast-flowing rocky streams. They are generally found in areas with large, intermittent, irregularly shaped rocks, within swift water. They tend to stay away from slow-moving water and muddy banks with slab rock bottoms.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW commented that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species.	No potentially suitable habitat was observed within the Project survey corridor. No inwater work is proposed for the Project.
Midland mud salamander (Pseudotriton montanus diastictus)	Threatened	None	This species inhabits muddy and silty areas along swamps, seeps, bogs, springs, floodplain forests, and headwater streams. Sightings of this species are rare, as the salamanders live underground in burrows.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW commented that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species.	ODNR determined that this project is not likely to impact this species.



Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Eastern spadefoot toad (<i>Scaphiopus</i> holbrooki)	Endangered	None	This species if found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW commented that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species.	No potentially suitable habitat was observed within the Project survey corridor. No inwater work is proposed for the Project.



ODNR Coordination – Coordination with the ODNR was initiated during the planning stages of the Project to obtain records of protected species located in the vicinity of the Project. On October 19, 2020, the ODNR Office of Real Estate Environmental Review Section replied to an emailed request for records of protected species within an extended area around the Project site. The Ohio Natural Heritage Database (ONHD) did not return records of state endangered or threatened plant or animal species within a one-mile radius of the Project area. Additionally, the ONHD did not return records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species.

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

The ODNR DOW also stated that due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact the little spectaclecase, the timber rattlesnake, the eastern hellbender, the midland mud salamander, or the eastern spadefoot toad

ODNR-DOW recommended that a desktop habitat assessment, followed by a field assessment (if needed), be conducted to determine if there are potential bat hibernaculum(a) present within the Project Area. In addition to conducting a general habitat survey in September and October 2020, AECOM performed a limited desktop habitat assessment to determine potential hibernaculum(a) within the Project area and the habitat assessment is included in this report in Appendix G. Two potential hibernacula were found as a result of the assessment and the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer be put around the hibernaculum entrance; however, limited summer or winter tree cutting may be acceptable after consultation with DOW.

USFWS Coordination – Coordination with the USFWS was also initiated during the planning stages of the Project to obtain technical assistance regarding federally listed species that may occur within the Project vicinity. The USFWS responded on October 7, 2020, indicating that the Project crosses the Wayne National Forest and a federal authorization from the Forest Service may be required. During the siting process of the Project, it was determined that a federal authorization from the Forest Service was not required for the Project.

4.0 SUMMARY

The ecological survey of the Project survey corridor identified a total of four wetlands, four streams, and no ponds. The wetlands consisted of three PEM wetlands and one PFO wetland, all of which were Category 2. Of the four wetlands, three have provisionally been classified as adjacent wetlands and WOTUS under the Clean water act after the 2020 Navigable Waters Rule vacatur, while the remaining one wetland has been provisionally classified as isolated and not WOTUS.



The four streams identified within the Project survey corridor include one ephemeral stream and three perennial streams. The four streams were assessed using the HHEI methodology (drainage area less than 1 mile [mi] ²). Stream 03 was additionally assessed using the QHEI methodology (drainage area greater than 1 mi²) due to its maximum pool depth measuring greater than 40 centimeters (cm).

AECOM has preliminarily determined that all identified streams appear to be jurisdictional (i.e., WOTUS.), based on the Clean Water Act after the 2020 Navigable Waters Rule vacatur. Final jurisdictional status of the identified waterbodies can only be determined by the USACE.

According to a response letter received from the USFWS on March 9, 2018, this Project is located within the range of the federally endangered Indiana bat and the federally threatened northern long-eared bat. With regard to state threatened and endangered species that may occur within the Project vicinity, 14 species were listed by ODNR. These species included: Indiana bat, northern long-eared bat, little brown bat, tricolored bat, little spectaclecase, brook lamprey, Ohio lamprey, spotted darter, Tippecanoe darter, timber rattlesnake, eastern hellbender, midland mud salamander, eastern spadefoot toad, and the northern harrier.

Based on general observations during the ecological survey, a portion of the Project survey corridor contained potential summer habitat for the Indiana bat and the northern long-eared bat. The USFWS commented that due to the project type, size, and location, 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. ODNR stated that if suitable habitat occurs within the Project area, the DOW recommends trees be conserved. If suitable habitat occurs within the Project area and trees must be cut, the DOW recommends cutting between October 1 and March 31. Based on the Winter Bat Habitat Assessment (Appendix G) two potential winter hibernacula are located withing a 0.25-mile radius of the project. The DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer be put around the hibernaculum entrance; however, limited summer or winter tree cutting may be acceptable after consultation with DOW.

Based on general observations during the ecological survey, a portion of the Project survey corridor contained potentially suitable habitat for the northern harrier. The ODNR-DOW recommends that construction should be avoided within grassland habitat (old field & pasture/hay field) during the species' nesting period of May 15 to August 1.

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.



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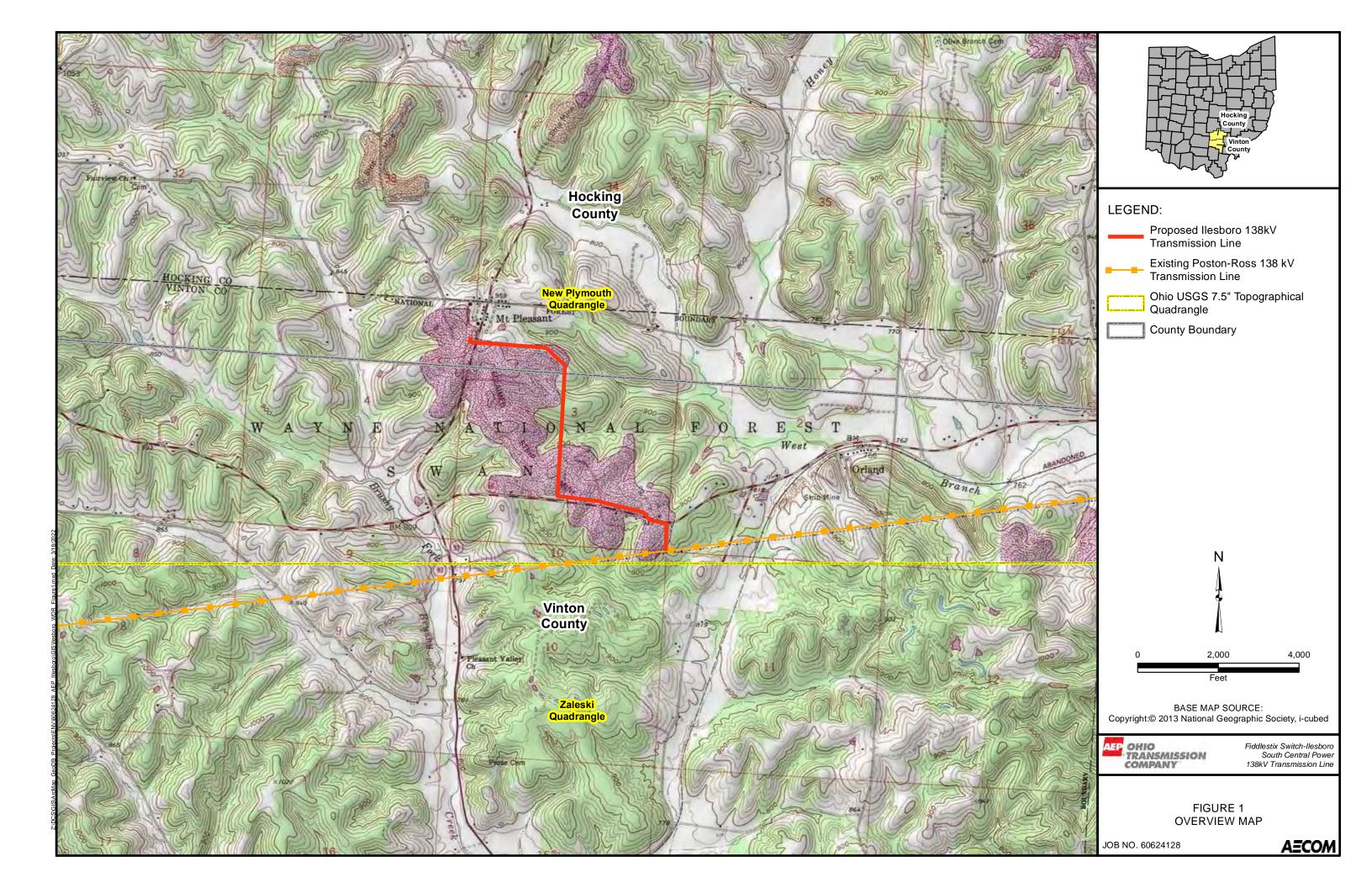
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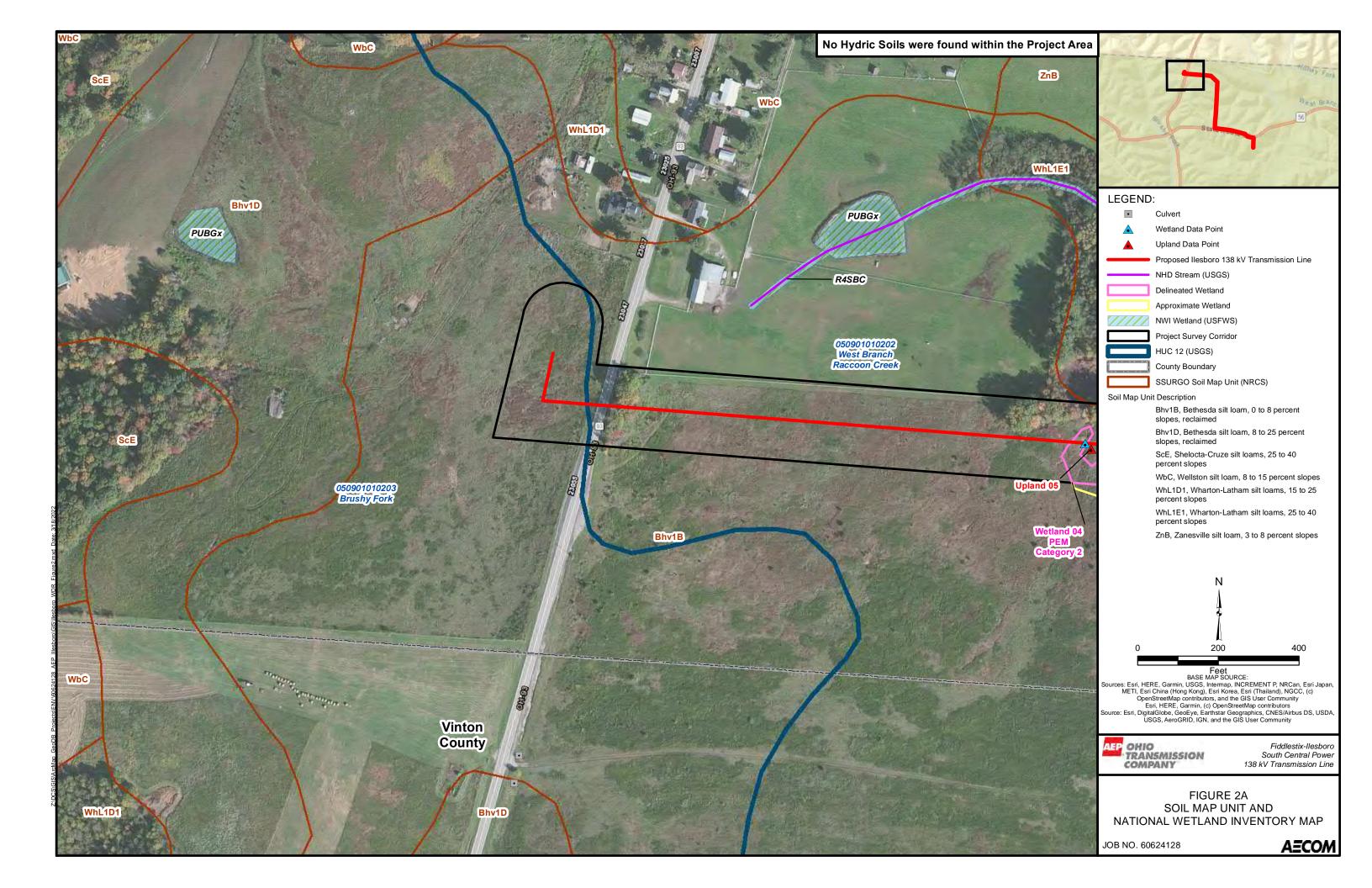


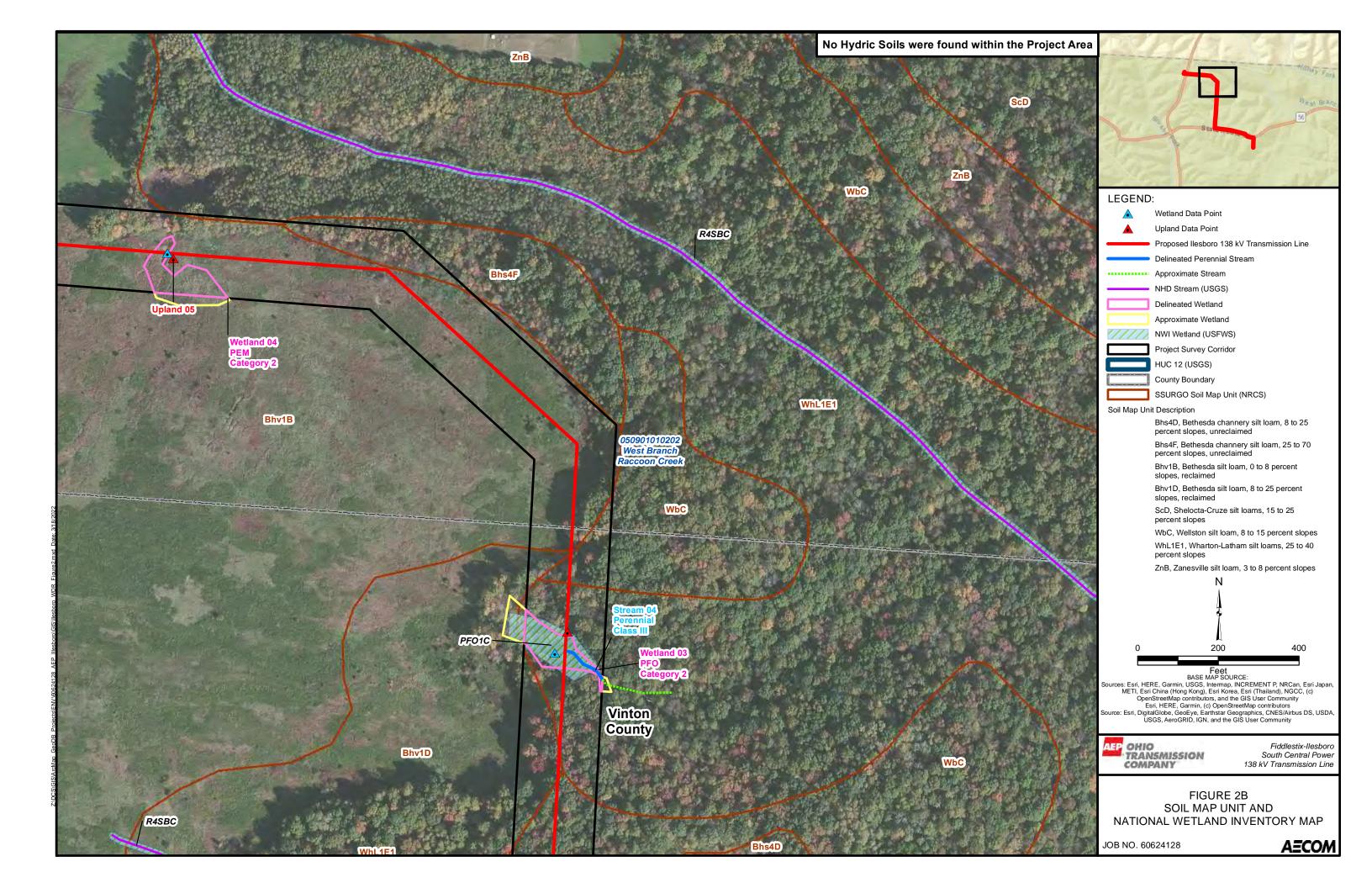
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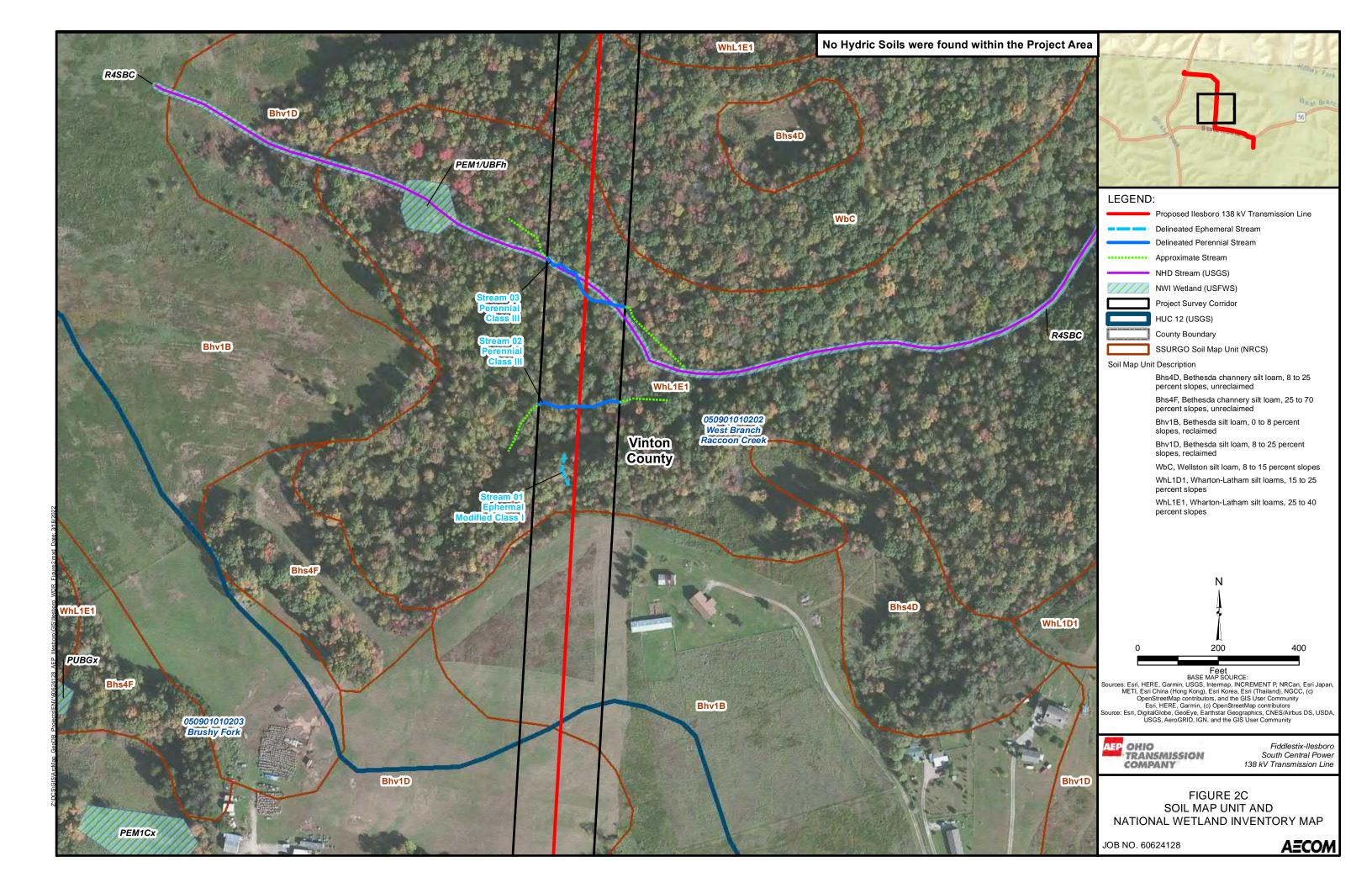


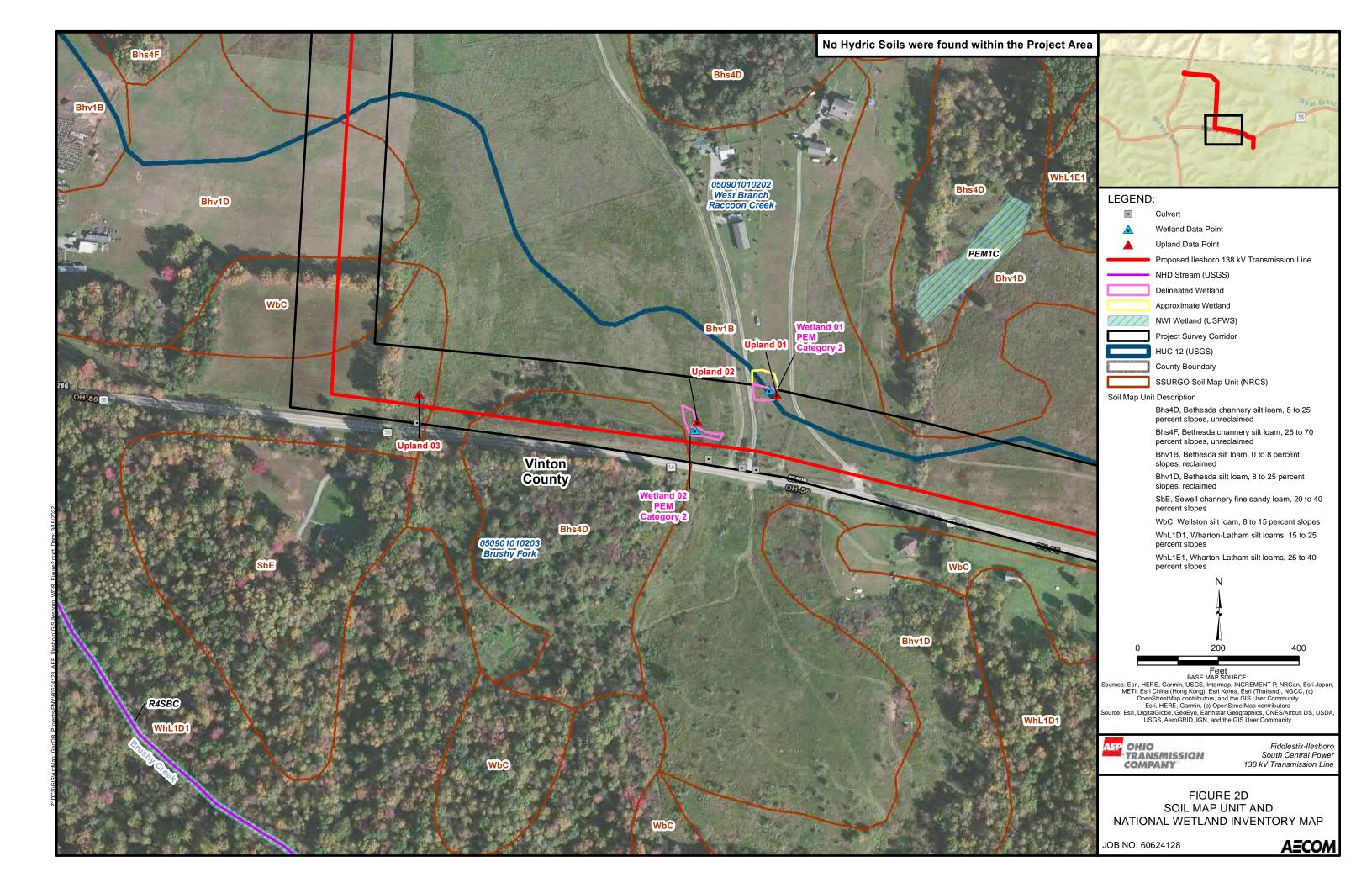
FIGURES

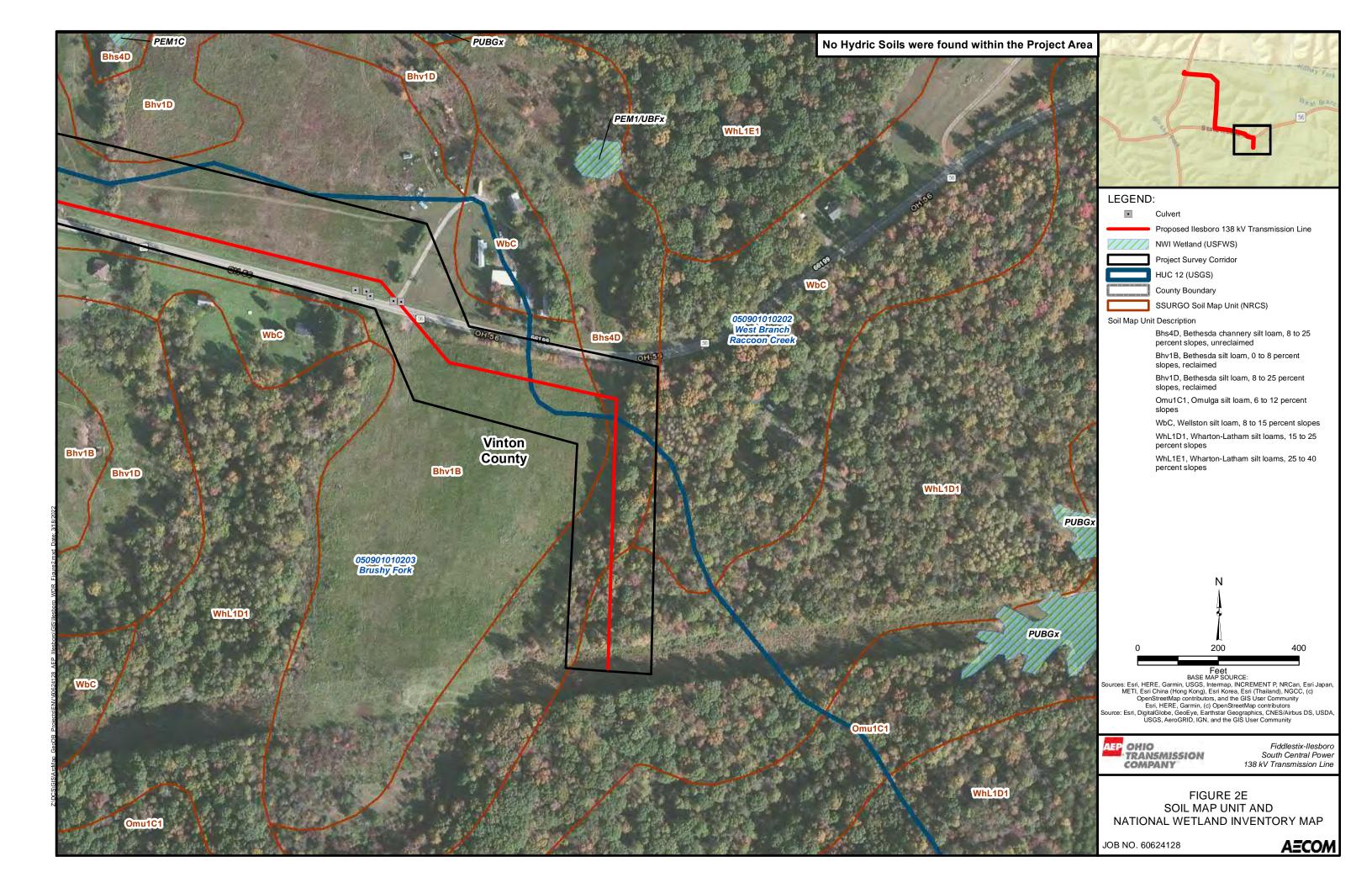


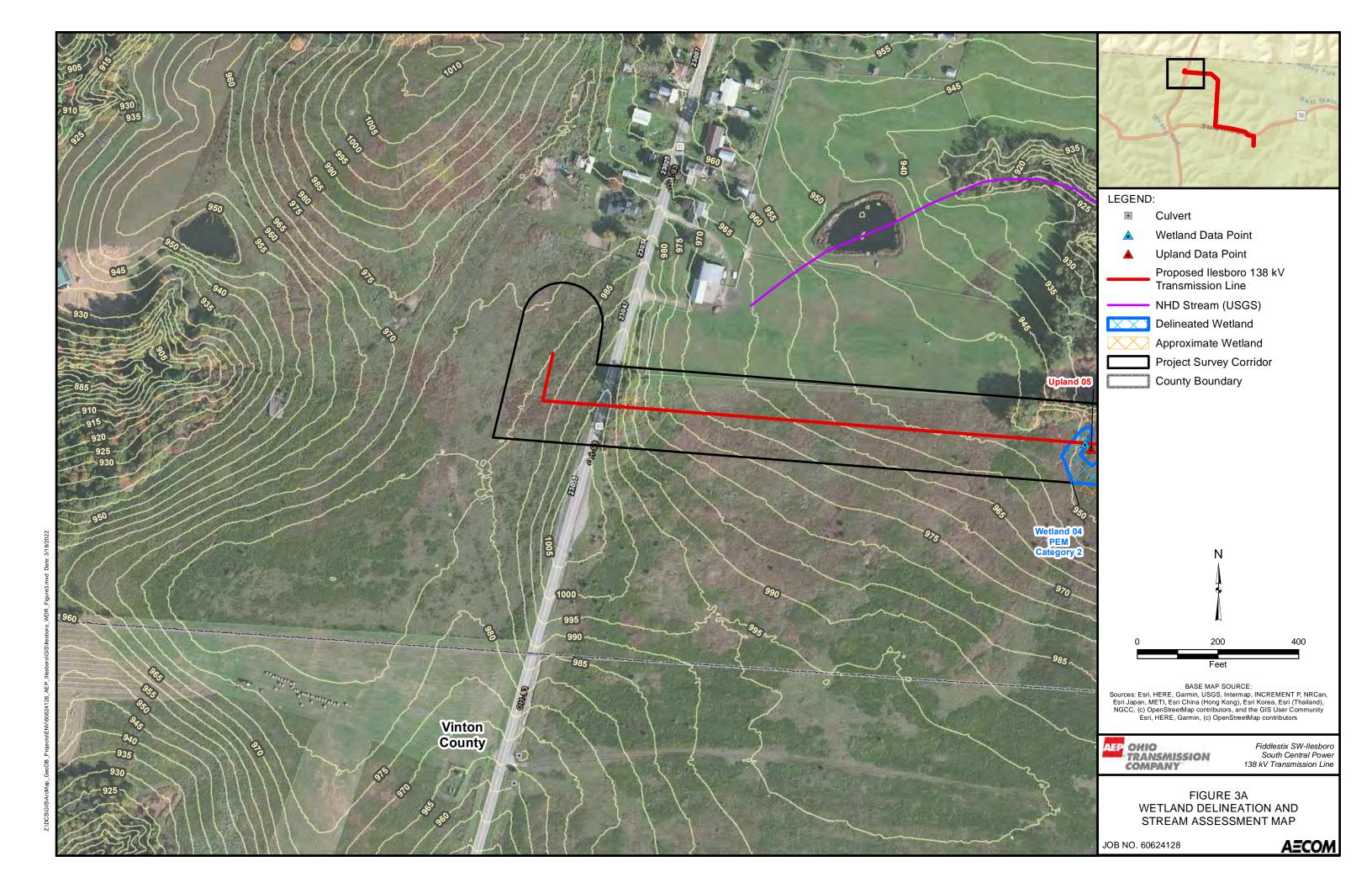


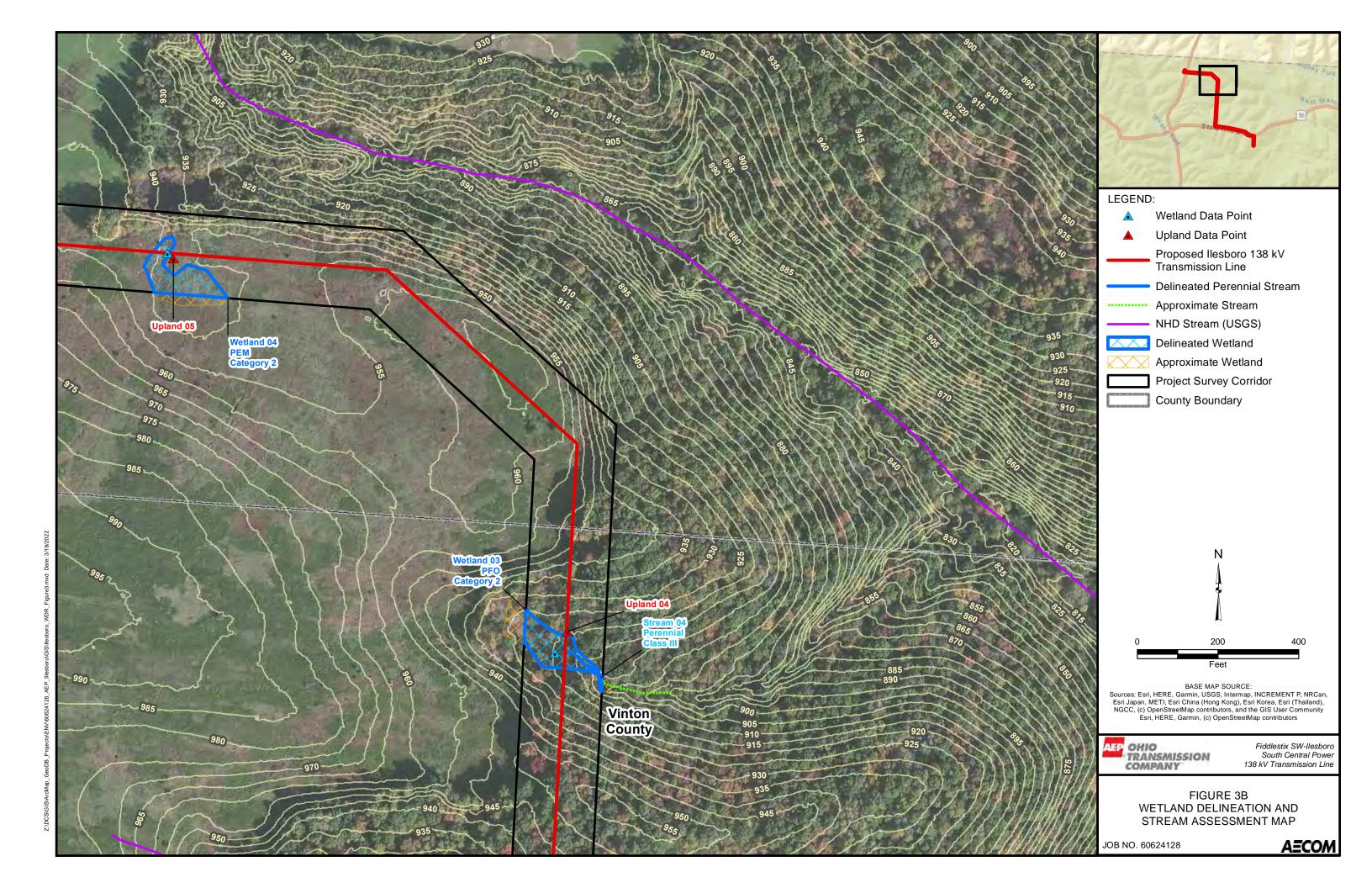


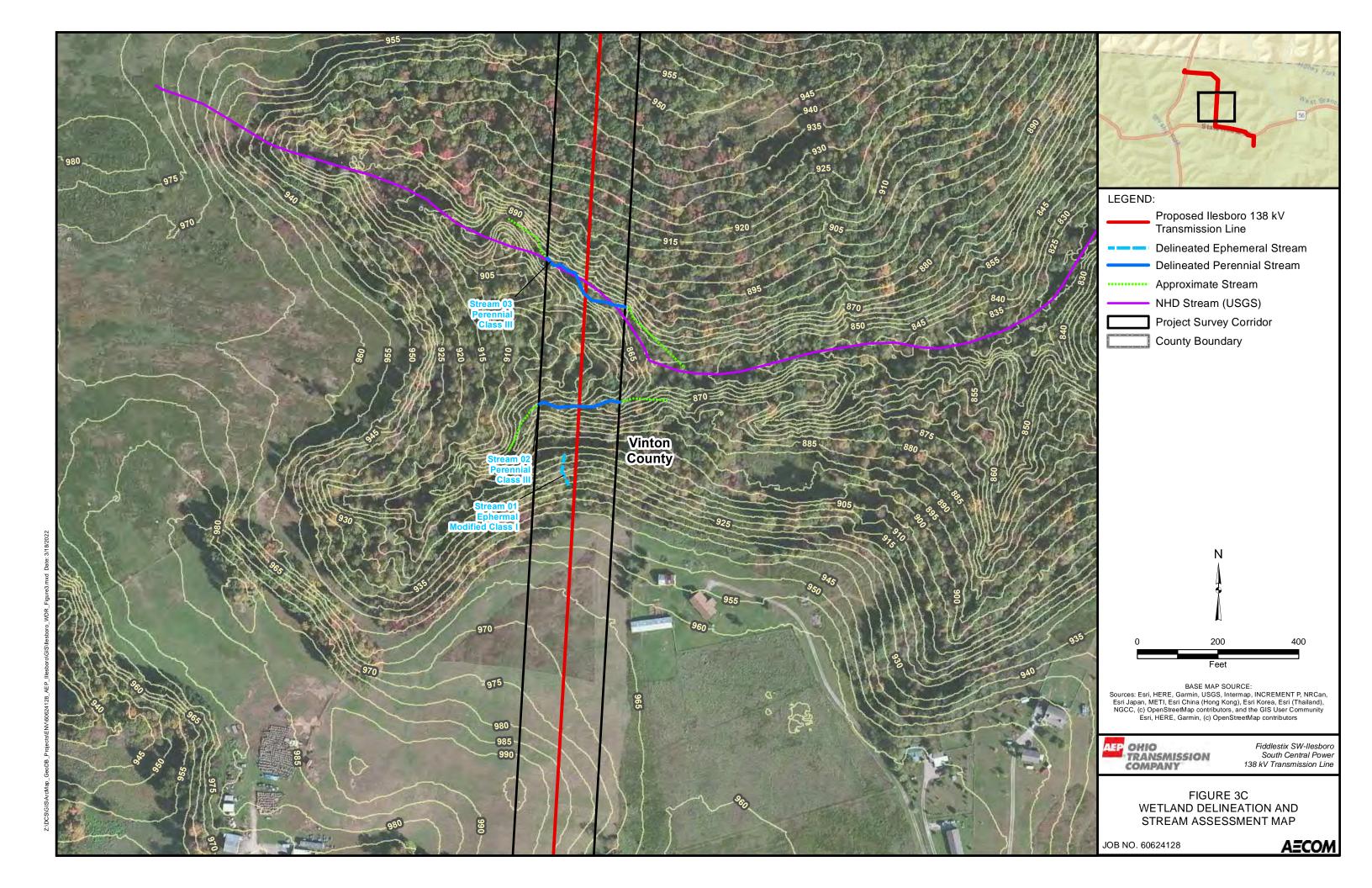


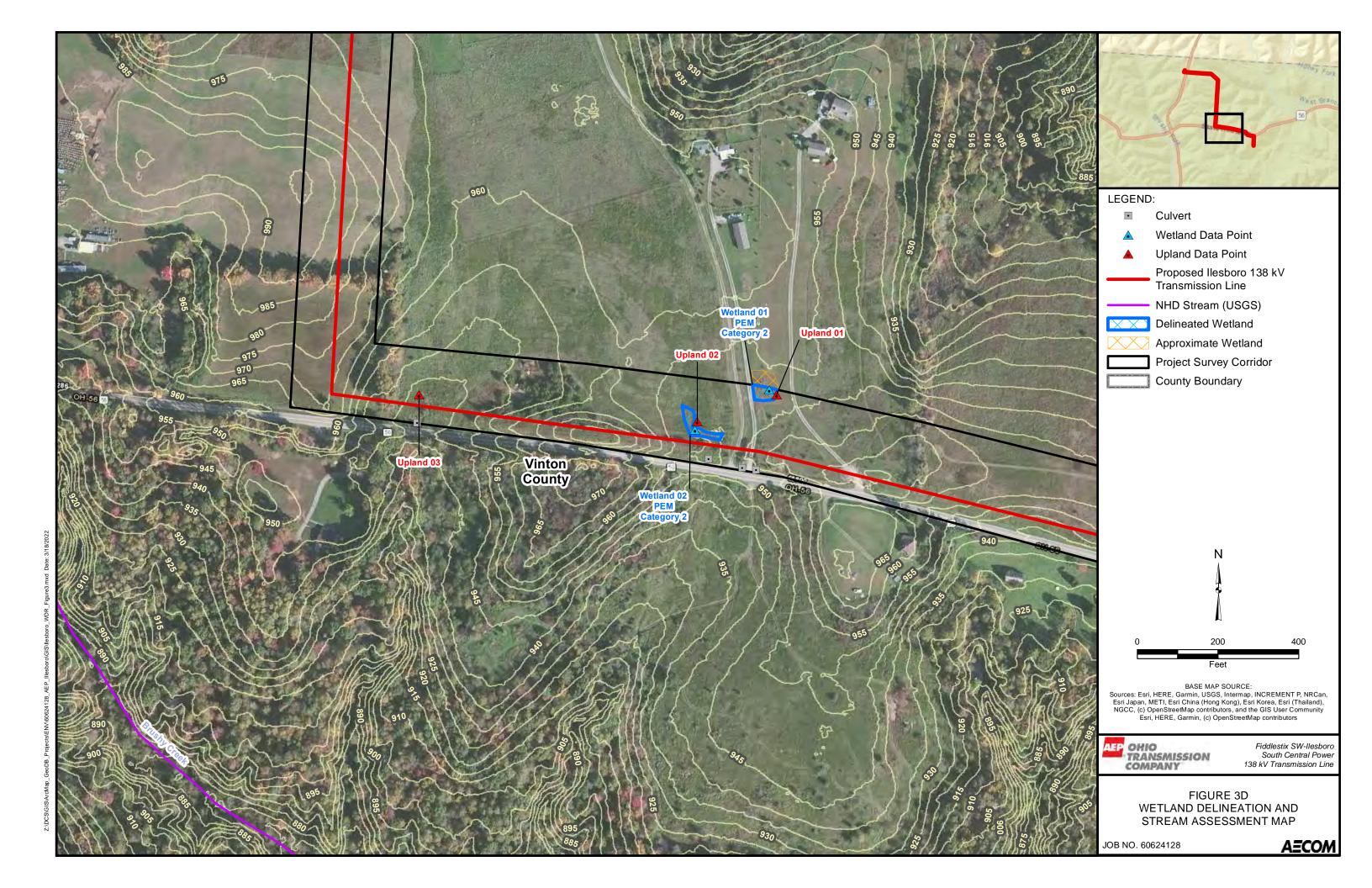


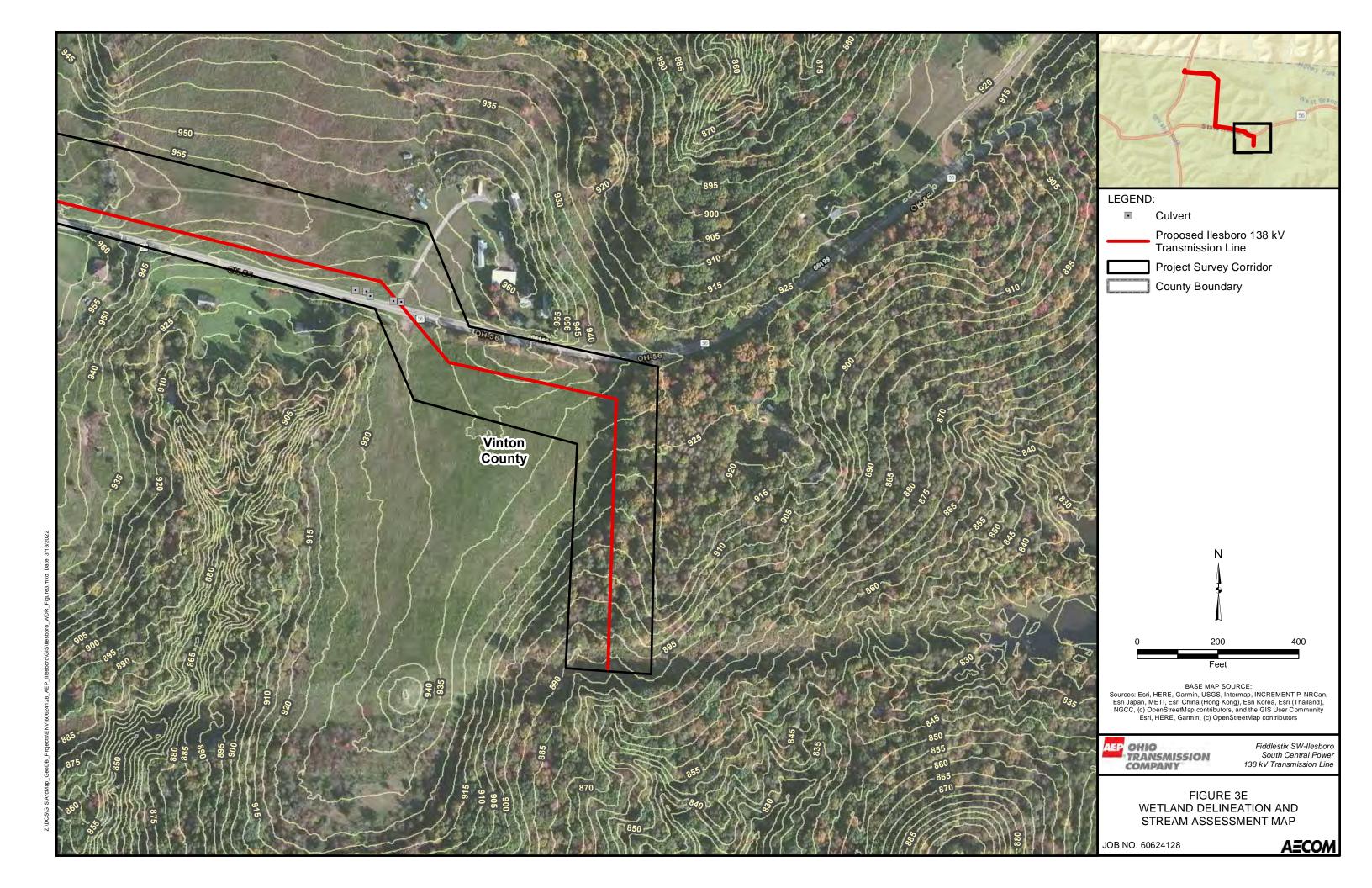


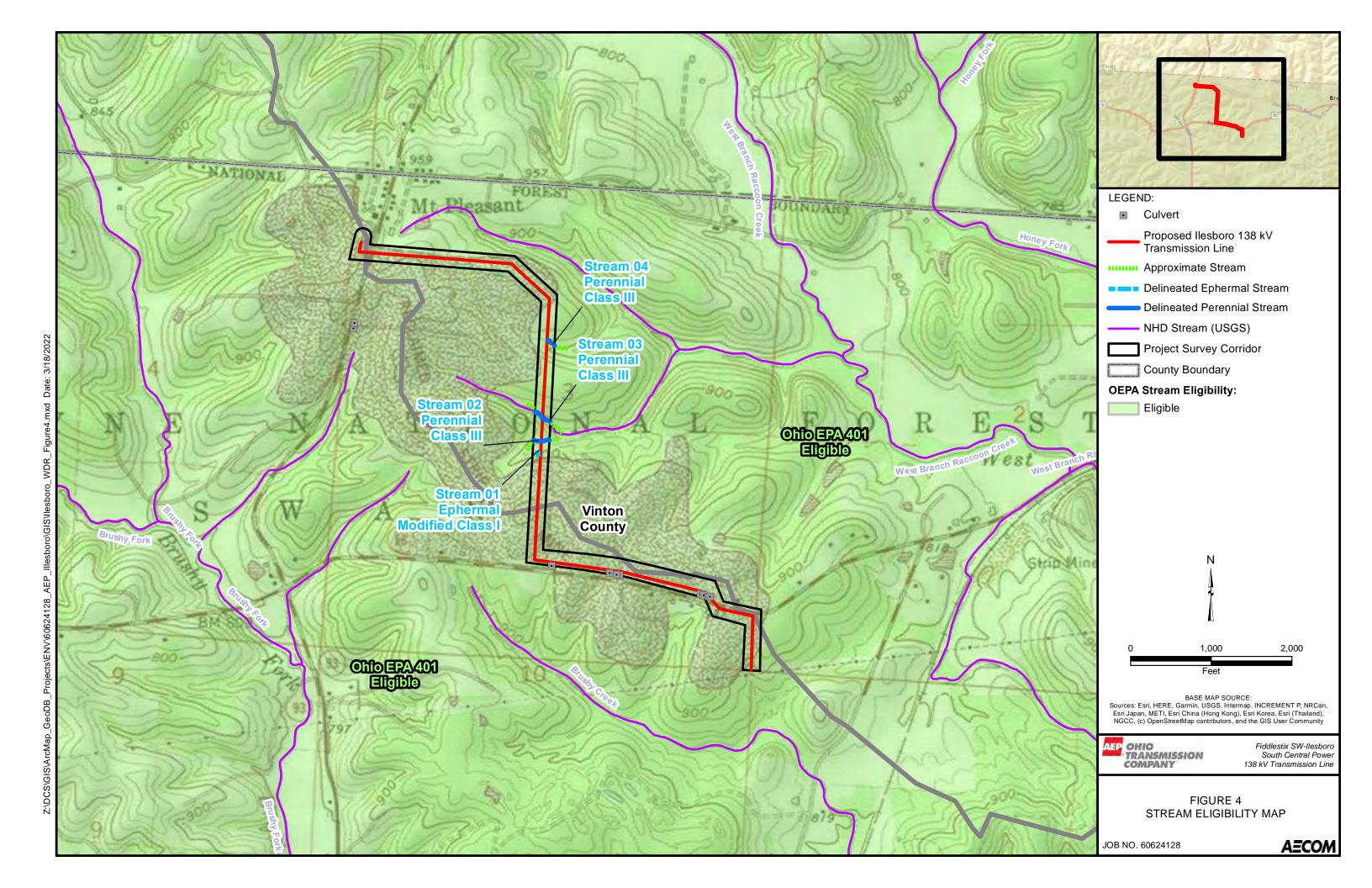


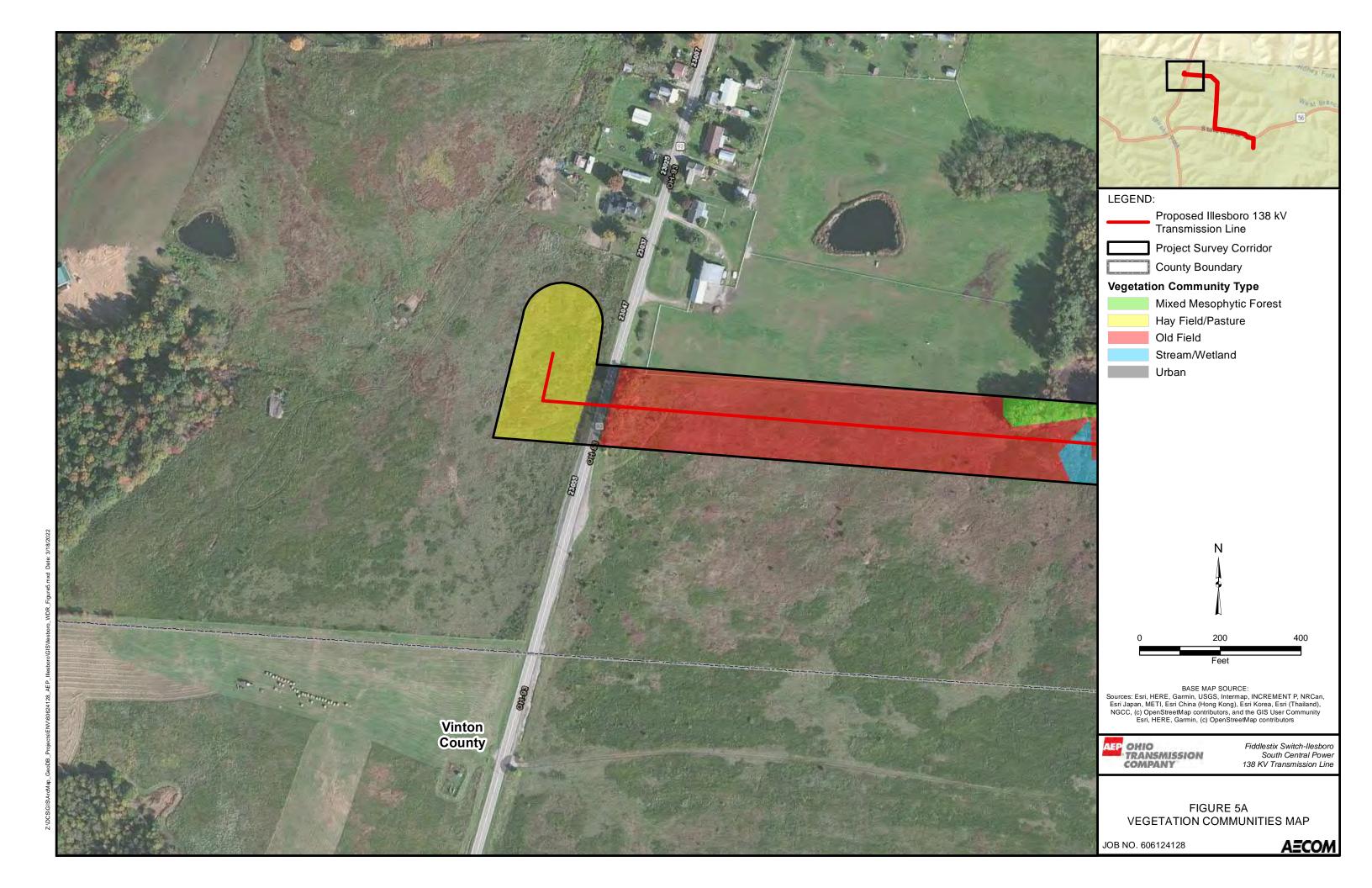


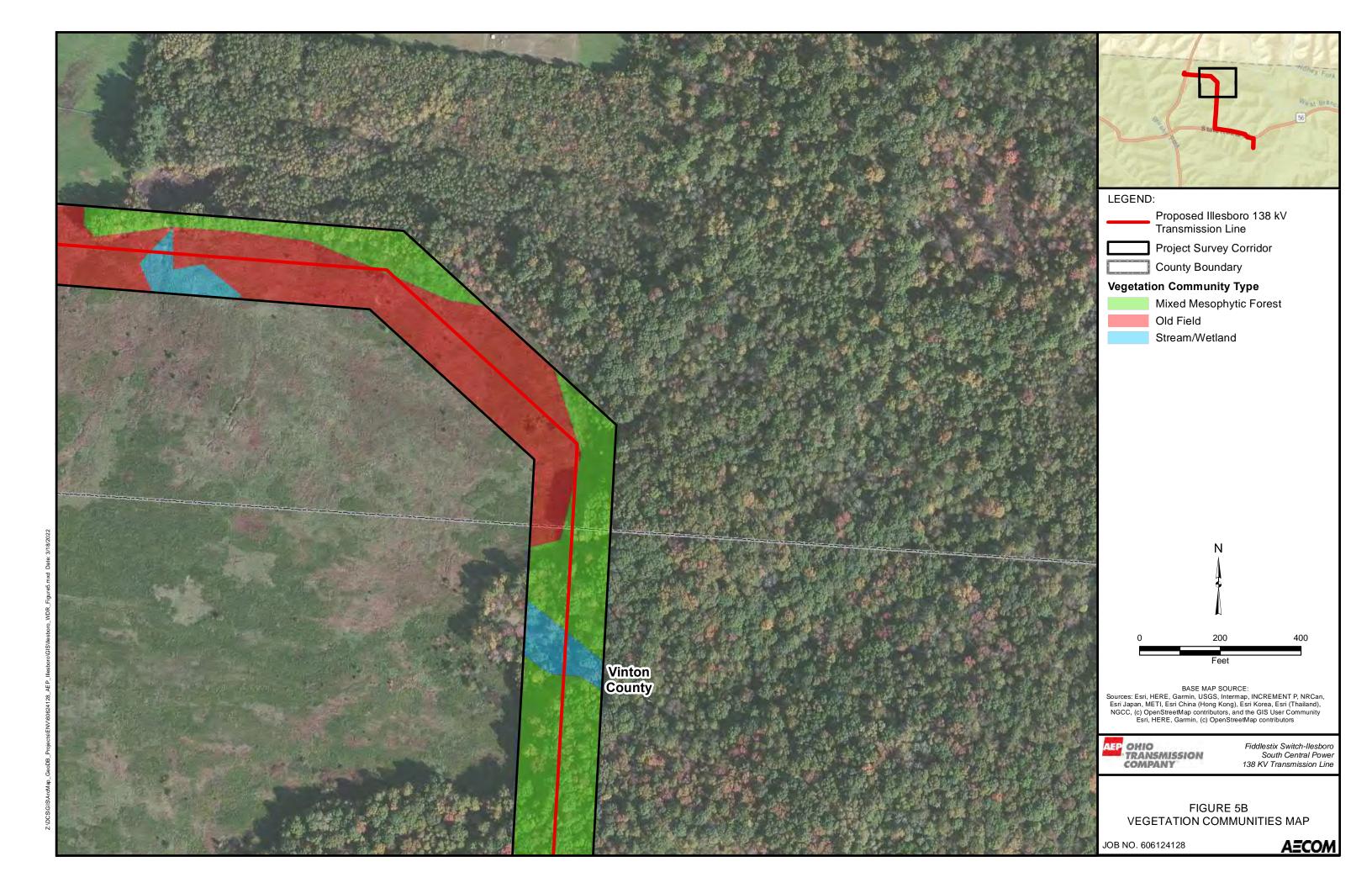


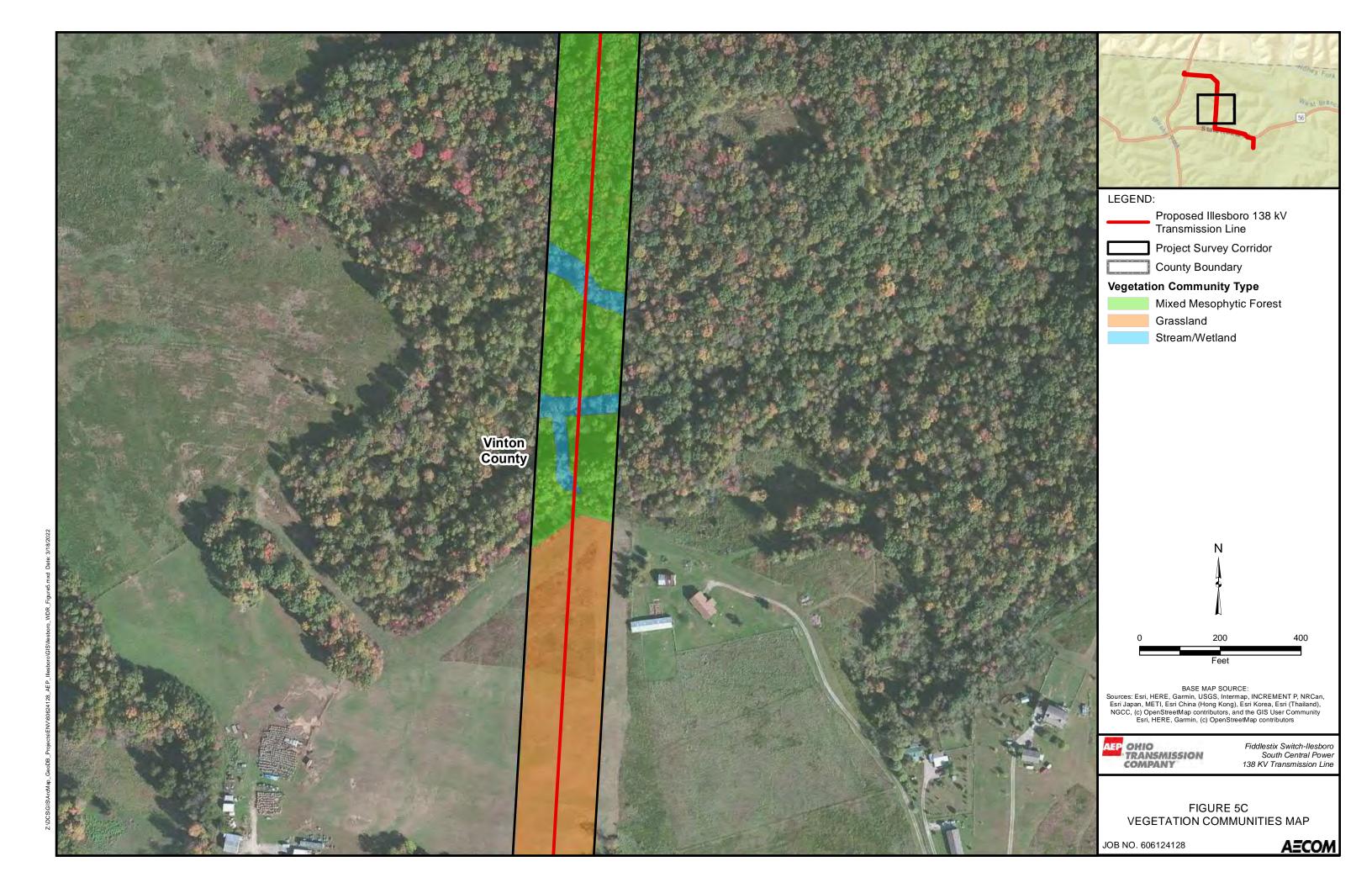


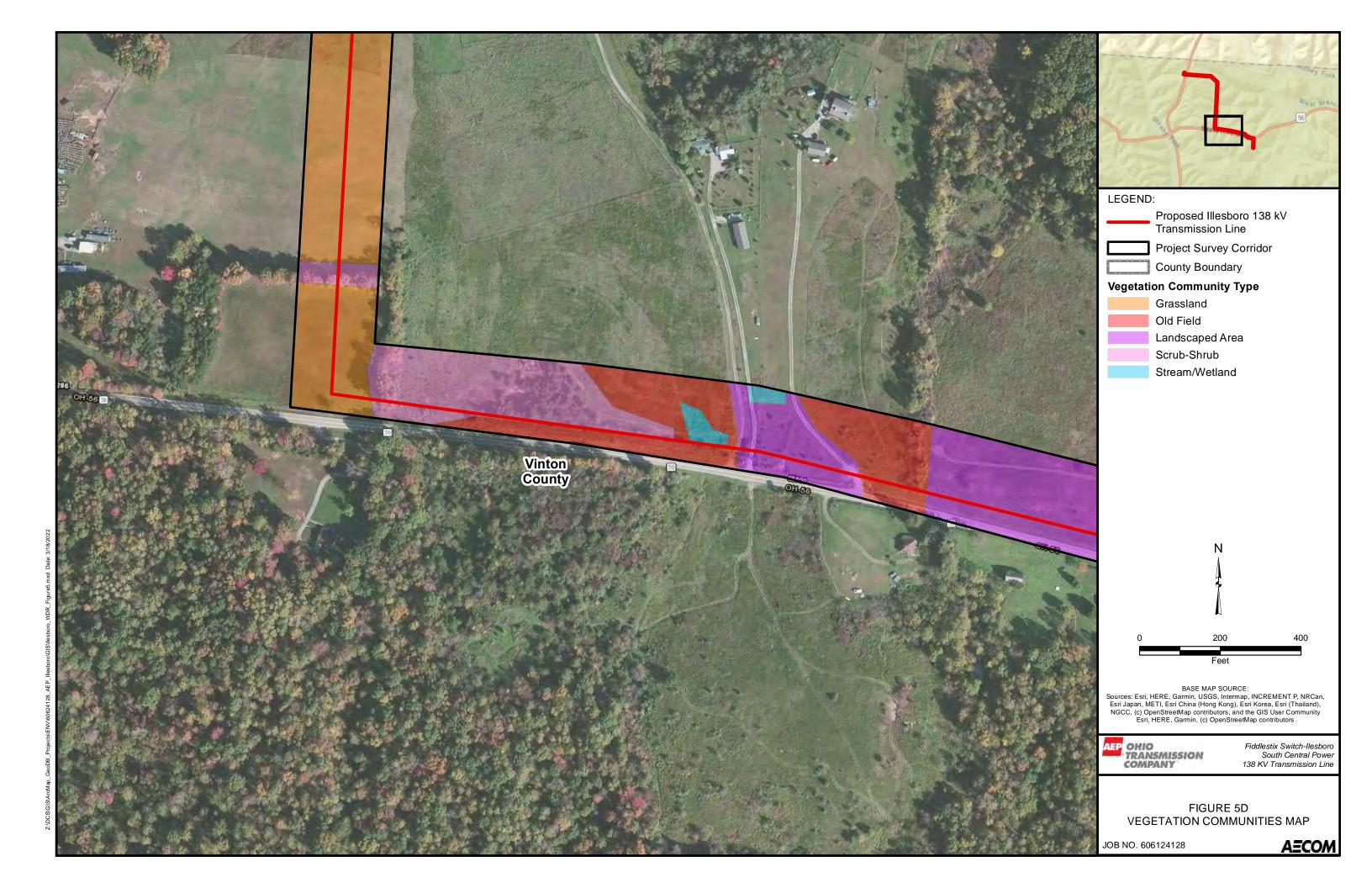


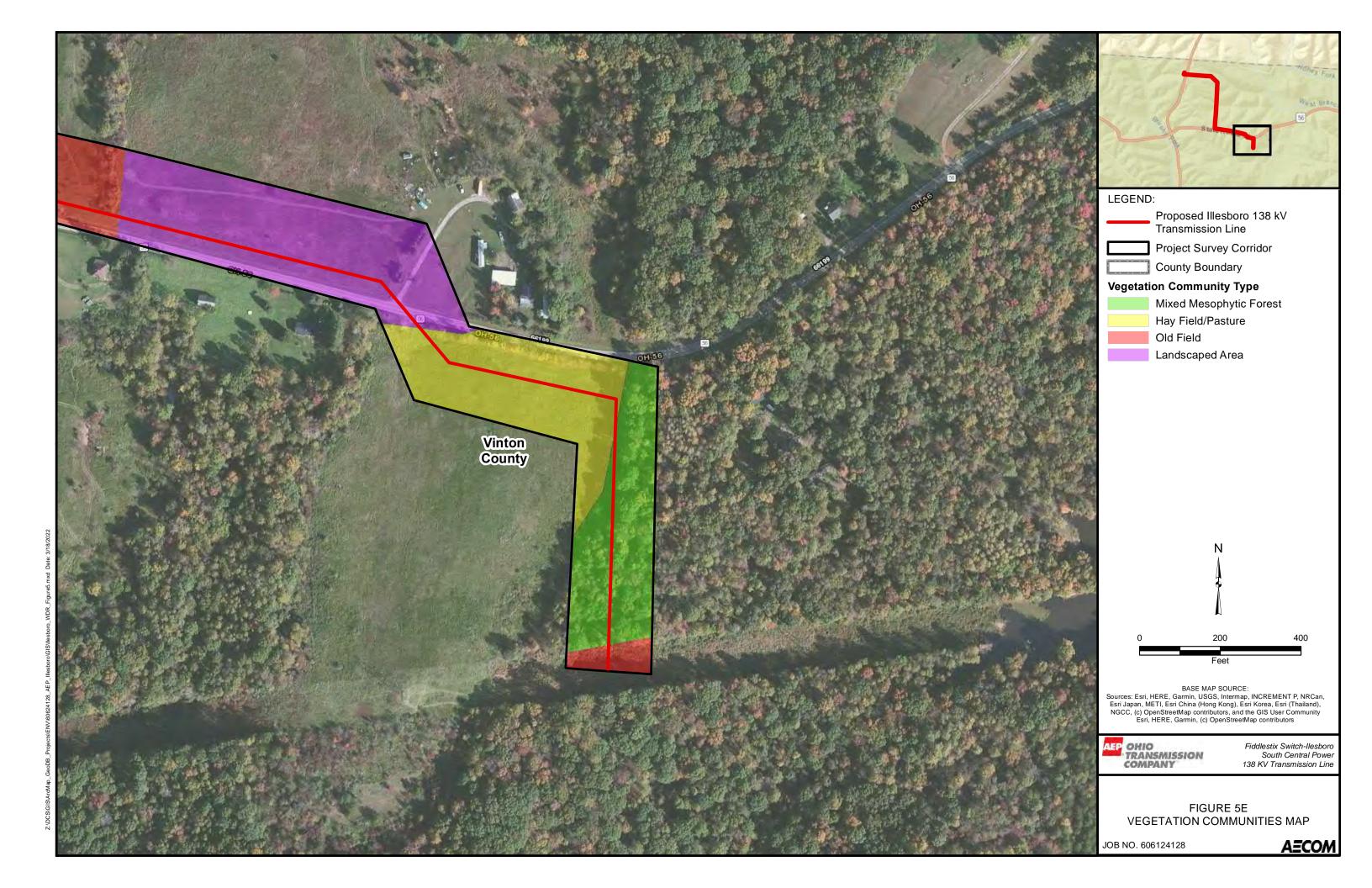














APPENDIX A

PROJECT WETLAND TABLE

FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138 KV T-LINE PROJECT WETLAND TABLE

	Loc	ation			Dellerested	C	RAM	Nassas	Fulation	Burneral	04	Prop	osed Impacts
Wetland ID	Latitude	Longitude	Isolated?	Habitat Type	Delineated Area (acre)	Score	Category	Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland	Proposed Structure # in Wetland	Structure Installation Method	Temporary Matting Area (acre)	Permanent Impact Area (acre)
Wetland 01	39.379622	-82.446782	Yes	PEM	0.041	32	2	N/A	N/A	N/A	TBD	TBD	TBD
Wetland 02	39.379401	-82.447372	No	PEM	0.056	34.5	2	N/A	N/A	N/A	TBD	TBD	TBD
Wetland 03	39.387114	-82.450103	No	PFO	0.300	61	2	N/A	N/A	N/A	TBD	TBD	TBD
Wetland 04	39.389647	-82.453391	No	PEM	0.311	45	2	N/A	N/A	N/A	TBD	TBD	TBD
				Total:	0.708							0.000	0.000



APPENDIX B

U.S. ARMY CORPS OF ENGINEERS WETLAND DATA FORMS

OEPA WETLAND ORAM FORMS

DELINEATED FEATURES PHOTOGRAPHS (WETLANDS)

Wetland 01

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Sampling Point: -WRL-20201001-02-PE T 12N R 17W concave Slope: 0.0 % / 0.0 °
concave Slope: 0.0 % / 0.0 °
82.44673 Datum: NAD83
NWI classification: None
in in Remarks.)
mstances" present? Yes No ○
n any answers in Remarks.)
ansects, important features, etc.
● No ○
ed in a depression, possibly old pond, in ed. Wetland boundary fully delineated.
ndary Indicators (minimum of two required) urface Soil Cracks (B6) parsely Vegetated Concave Surface (B8) rainage Patterns (B10) loss Trim Lines (B16) rry Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Position (D2) hallow Aquitard (D3) licrotopographic Relief (D4) AC-neutral Test (D5)
Present? Yes ● No ○
n of precipitation and surface runoff into bond that has been partially filled in with no Potentially isolated.

Wetland 01 VEGETATION (Five/Four Strata) - Use scientific names of plants.

			ominant		Sampling Point: W-WRL-20201001-02-P
	Absolute % Cover	Re	ecies? - el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC:3(A)
2.			0.0%		
3			0.0%		Total Number of Dominant Species Across All Strata: 4 (B)
4		П	0.0%		Species Across Air Strata.
5		\Box	0.0%		Percent of dominant Species
		\Box	0.0%		That Are OBL, FACW, or FAC: 75.0% (A/B)
6		\Box	0.0%		Prevalence Index worksheet:
7		\Box	0.0%		Total % Cover of: Multiply by:
8					
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius)		= 10	otal Cover		0BL speci es 22 x 1 = 22
1. Rosa multiflora	1	✓	100.0%	FACU	FACW speci es x 2 =140
2.			0.0%		FAC speci es $2 \times 3 = 6$
		\Box	0.0%		FACU species 23 x 4 = 92
3		\Box	0.0%		UPL species $0 \times 5 = 0$
4		\Box	0.0%		Column Totals: <u>117</u> (A) <u>260</u> (B)
5					
6			0.0%		Prevalence Index = B/A = 2.222
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9	0		0.0%		✓ Dominance Test is > 50%
10	0	Ш	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= To	otal Cover	-	Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3.	0	\Box	0.0%		¹ Indicators of hydric soil and wetland hydrology must
		\Box	0.0%		be present, unless disturbed or problematic.
4			0.0%		Definition of Vegetation Strata:
5					Four Vegetation Strata:
6			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		Ш	0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: <u>5' radius</u>)		= Tc	otal Cover	-	of height.
1. Juncus effusus	30	✓	25.9%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Scirpus cyperinus	20	✓	17.2%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Epilobium coloratum	20	✓	17.2%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Carex vulpinoidea	10		8.6%	OBL	Woody vines - Consists of all woody vines greater than 3.28 ft
5. Scirpus atrovirens	10		8.6%	OBL	in height.
6. Carex grisea	10		8.6%	FACU	Fire Venetation Charter
7. Andropogon virginicus	5		4.3%	FACU	Five Vegetation Strata:
Lactuca canadensis	5	\Box	4.3%	FACU	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9. Acalypha virginica	2	\Box	1.7%	FACU	diameter at breast height (DBH).
	2	\Box	1.7%	OBL	Sapling stratum – Consists of woody plants, excluding woody
10. Typha latifolia		\Box	1.7%	FAC	vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11. Conoclinium coelestinum	2	\Box		FAC	Shrub stratum – Consists of woody plants, excluding woody
12	0		0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' radius)	116	= 10	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0_		0.0%		in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0		0.0%	`	height.
5	0		0.0%		
6	0		0.0%		Hydrophytic Vegetation
U	0	_ T	otal Cove		Present? Yes No O
		- 1	otal COVE	1	
Remarks: (Include photo numbers here or on a separate shee	et.)				
Hydrophytic vegetation indicators present, dominance test=75%, dor	ninant speci	ies a	re FACW a	nd FACU.	

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS. US Army Corps of Engineers

Soil Sampling Point: W-WRL-20201001-02-P

rofile Desc	ription: (D		the depth	needed to				nfirm the a	absence of indicator	rs.)	
Depth (inches)	Color	Matrix (moist)	%	Color	(moist)	edox Feat	Tvpe_1	Loc ²	Texture	Re	marks
0-2	2.5Y	4/2	95	2.5Y	4/4	5	C	PL	Sandy Loam	- NC	marks
2-9	2.5Y	4/1	80	2.5Y	5/6	5	С	PL	Sandy Clay	distinct	
	2.01					-			Sandy Slay	, concentra	ITI ONS
		-		2.5Y	4/6	15	C	M			
					,	,				 ,	
		`								`	
					-				. —	·	
											
										·	
						_					
ype: C=Cor	ncentration.	D=Depletion	on. RM=Redu	uced Matrix,	CS=Cover	ed or Coate	ed Sand Grai	ns ² Loca	tion: PL=Pore Lining.	M=Matrix	
	Indicators									Problematic Hydr	ic Soils 3.
Histosol				☐ Dar	k Surface ((S7)				3	IC 30IIS .
_	ipedon (A2)					. ,	(S8) (MLRA	147,148)		(A10) (MLRA 147)	
Black His				_			MLRA 147, 1		Coast Prairi (MLRA 147	e Redox (A16)	
Hydroger	n Sulfide (A4	1)		Loa	my Gleyed	Matrix (F2)			loodplain Soils (F19))
Stratified	Layers (A5))		☐ Dep	leted Matr	ix (F3)			(MLRA 136		′)
2 cm Mud	ck (A10) (LR	RN)		Red	ox Dark Su	urface (F6)			☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Depleted	Below Dark	Surface (A	A11)	☐ Dep	leted Dark	Surface (F	7)				
Thick Da	rk Surface (A12)		Red	ox Depres	sions (F8)					
Sandy Mi	uck Mineral	(S1) (LRR	N,	☐ Iron	-Mangane	se Masses	(F12) (LRR N	١,			
MLRA 14	,				RA 136)	(= > (1 -)		>			
_	eyed Matrix	(S4)					LRA 136, 12.		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
✓ Sandy Re							s (F19) (MLR				
Stripped	Matrix (S6)			☐ Red	Parent Ma	aterial (F21) (MLRA 127	', 147)			
estrictive L	_ayer (if ob	served):									
Туре:											
Depth (inc	ches):								Hydric Soil Prese	ent? Yes •	No O
ovel refus: stinct redo:	al at 11" d x in pore li	ue to rock nings pre	k. Significar sent.	ntly disturb	ed soils a	s reclaim	ed mine lar	nd, thougl	h hydric soil indicat	or well developed	d as low chroma wit

Upland 01

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Ilesboro 138 kV Pro	oject / Wetland w-wrl-20201001-02 Ci	ity/County: Vinton	Sampling Date: 01-Oct-20
Applicant/Owner: AEP		State: OH	Sampling Point: JPL-WRL-20201001-03
Investigator(s): WRL, SKM	S	Section, Township, Range: S	3 T 12N R 17W
Landform (hillslope, terrace, etc.):	Undulating	cal relief (concave, convex, none	e):
Subregion (LRR or MLRA): LRR N	Lat.: 39	9.37961 Long.:	-82.44667 Datum: NAD83
Soil Map Unit Name: Bhv1B - Bethe	esda silt loam, 0 to 8 percent slopes,	reclaimed	NWI classification: None
Are climatic/hydrologic conditions or	n the site typical for this time of year?	? Yes ⊙ No O (Ifno, exp	plain in Remarks.)
Are Vegetation 🔲 , Soil 🗹	, or Hydrology Significantly d	disturbed? Are "Normal Cir	cumstances" present? Yes 🍑 No 🔾
Are Vegetation , Soil ,	, or Hydrology naturally prob	olematic? (If needed, exp	lain any answers in Remarks.)
Summary of Findings - At		npling point locations,	transects, important features, etc.
Hydrophytic Vegetation Present?	Yes O No O		
Hydric Soil Present?	Yes O No O	Is the Sampled Area within a Wetland?	es O No •
Wetland Hydrology Present?	Yes ○ No ●	within a wendia:	
elevation. Not a wetland point as r Hydrology	no wetland criteria were met. Reclaim	ned strip mine land = significant	tly disturbed soils.
Wetland Hydrology Indicators:		Se	econdary Indicators (minimum of two required)
Primary Indicators (minimum of on	ne required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B		Sparsely Vegetated Concave Surface (B8)
☐ High Water Table (A2)☐ Saturation (A3)	☐ Hydrogen Sulfide Odor		Drainage Patterns (B10)
Water Marks (B1)	Oxidized Rhizospheres Presence of Reduced I	along Living Roots (C3)	J Moss Trim Lines (B16) Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	` '	Crayfish Burrows (C8)
Drift deposits (B3)	☐ Thin Muck Surface (C7	7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rema	arks)	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)☐ Inundation Visible on Aerial Imager	., (D7)	<u> </u>	Geomorphic Position (D2) Shallow Aquitard (D3)
Water-Stained Leaves (B9)	y (D1)		Shallow Aquitara (D3) Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes	No Depth (inches):	^	
	_	0	
Water Table Present? Yes C Saturation Present?		Wetland Hydrolo	gy Present? Yes O No 💿
(includes capillary fringe) Yes			
Describe Recorded Data (stream ga	auge, monitoring well, aerial photos, p	previous inspections), if available	e:
Remarks:			
No hydrology indicators present.			

Upland 01 VEGETATION (Five/Four Strata) - Use scientific names of plants.

			ominant		Sampling Point: <u>UPL-WRL-20201001</u>	<u>-03</u>
Tree Stratum (Plot size: _30' radius)	Absolute % Cover	Re	ecies? = el.Strat. over	Indicator Status	Dominance Test worksheet:	
1	0		0.0%	,	Number of Dominant Species That are OBL, FACW, or FAC: (A)	
2.			0.0%			
3	0		0.0%		Total Number of Dominant Species Across All Strata: 4 (B)	
4			0.0%		Species Across All Strata.	
5		\Box	0.0%		Percent of dominant Species	
		\Box	0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)	
6		\Box	0.0%		Dravalance Index warksheet.	
7					Prevalence Index worksheet: Total % Cover of: Multiply by:	
8			0.0%			
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius)		= 10	otal Cover		0BL speci es x 1 =	
4 Flores - 1 - 11 - 1	E	✓	71.4%	UPL	FACW species	
• • • • • • • • • • • • • • • • • • • •		✓	28.6%	FACU	FAC speci es <u>3</u> x 3 = <u>9</u>	
			0.0%	TACO	FACU speci es $108 \times 4 = 432$	
3		\vdash			UPL species $\frac{5}{25}$ x 5 = $\frac{25}{25}$	
4			0.0%		·	
5			0.0%		Column Totals: <u>121</u> (A) <u>476</u> (B)	
6	0		0.0%		Prevalence Index = B/A = 3.934	
7	0	Ш	0.0%		Hydrophytic Vegetation Indicators:	
8			0.0%		Rapid Test for Hydrophytic Vegetation	
9			0.0%		Dominance Test is > 50%	
10	0		0.0%		Prevalence Index is ≤3.0 ¹	
	7	= To				
Shrub Stratum (Plot size:)					Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)	
2	0		0.0%		Problematic hydrophytic vegetation (Explain)	
3	0		0.0%		¹ Indicators of hydric soil and wetland hydrology must	
4		Ш	0.0%		be present, unless disturbed or problematic.	
5			0.0%		Definition of Vegetation Strata:	
6.			0.0%		Four Vegetation Strata:	
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3	
	0	= To	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardle of height.	SS
Herb Stratum (Plot size: _5' radius)					Sapling/shrub stratum – Consists of woody plants, excluding	3
1. Lespedeza cuneata	50	✓	43.9%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
2. Dipsacus fullonum	30	✓	26.3%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plant	ts,
3. Andropogon virginicus		Ц	17.5%	FACU	regardless of size, and all other plants less than 3.28 ft tall.	
4. Symphyotrichum ericoides	5	Ш	4.4%	FACU	Woody vines – Consists of all woody vines greater than 3.28 in height.	ft
5. Juncus effusus	5	Ш	4.4%	FACW		
6. Eupatorium serotinum	2		1.8%	FAC	Five Vegetation Strata:	
7. Lactuca canadensis	1		0.9%	FACU	Tree - Woody plants, excluding woody vines, approximately 2	20
8. Vernonia gigantea	1		0.9%	FAC	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in	20
9.	0		0.0%		diameter at breast height (DBH).	
	0		0.0%		Sapling stratum – Consists of woody plants, excluding wood	
10	0	\Box	0.0%		vines, approximately 20 ft (6 m) or more in height and less th 3 in. (7.6 cm) DBH.	an
11	0	\Box	0.0%		Shrub stratum – Consists of woody plants, excluding woody	
12			otal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.	
Woody Vine Stratum (Plot size: 30' radius)	114	= 10	nai covei		Herb stratum - Consists of all herbaceous (non-woody) plant	ts,
1	0	Ш	0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1	m)
2	0_		0.0%		in height.	,
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of	
4	0		0.0%		height.	
•	0		0.0%			
5	0				Hydrophytic	
6			0.0%		Vegetation Present? Yes No No	
	0	= 1	otal Cove	T		
Remarks: (Include photo numbers here or on a separate shee No hydrophytic vegetation indicators present; dominance test = 0%,	,	pecie	es are FACU	J and UPL, _I	prevalence index > 3.0	

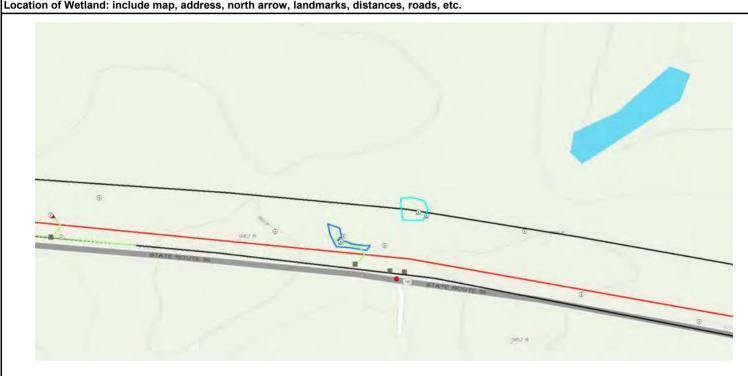
^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Upland 01

Soil Sampling Point: UPL-WRL-20201001-03

Profile Descr	iption: (De	escribe to	the depth	needed to	documen	t the indic	cator or co	nfirm the a	absence of indicator	rs.)	
Depth		Matrix				edox Feati	1				
(inches)		(moist)	%		(moist)	%	Tvpe	Loc2	Texture	Remarks promi nent redox	
0-5	10YR	4/2	90	10YR	5/8	10	C	M	Sandy Loam	concentrations in matrix prominent redox	
5-12	10YR	4/2	83	10YR	5/8	15	C	M	Sandy Clay	concentrations in matrix	
				10YR	4/1	20	D	M			
		`				1	•			,	
										· ·	
							· ·			· · · ·	
		,									
						_					
		`				-	`			·	
1										·	
		•	on. RM=Red	uced Matrix,	CS=Cover	ed or Coate	ed Sand Gra	iins ² Loca	tion: PL=Pore Lining.	M=Matrix	
Hydric Soil I									Indicators for F	Problematic Hydric Soils ³ :	
Histosol (,				k Surface		(0.0) (1.11.0.1		2 cm Muck	(A10) (MLRA 147)	
_	pedon (A2)						(S8) (MLRA		Coast Prairie	e Redox (A16)	
☐ Black Hist	. ,	`					MLRA 147, 1	48)	(MLRA 147,		
	n Sulfide (A4 Layers (A5)				ny Gleyed leted Matr	Matrix (F2)			loodplain Soils (F19)	
	k (A10) (LR			_ '		urface (F6)			(MLRA 136,		
			(11)	_		: Surface (F0)	7)		✓ Very Shallow Dark Surface (TF12)✓ Other (Explain in Remarks)		
	Below Dark k Surface (A	,	A11)		ox Depres	,	')				
	,		NI.				(F12) (LRR	N			
MLRA 147	uck Mineral (7, 148)	(SI) (LKK I	٧,	MLF	A 136)	oo massos	(1.12) (2.111	,			
Sandy Gle	eyed Matrix	(S4)		Um	oric Surfac	e (F13) (M	LRA 136, 12	22)	2		
☐ Sandy Re	dox (S5)			Pied	lmont Floc	odplain Soils	s (F19) (MLF	RA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Stripped !	Matrix (S6)			Red	Parent Ma	aterial (F21) (MLRA 12	7, 147)			
Destriction	(!£ - -										
Restrictive L	ayer (if ob										
Type:	boo).								Hydric Soil Prese	nt? Yes ○ No •	
Depth (inc	nes):										
Remarks:											
No hydric soi characteristic										ay have some relict hydric	
u iai actei istic	s suu pres	ent (low	CHIOHIa WI	iii uisiiiici i	edox con	icerili alioi	15, 1101 111 ¢	ore illing	5).		

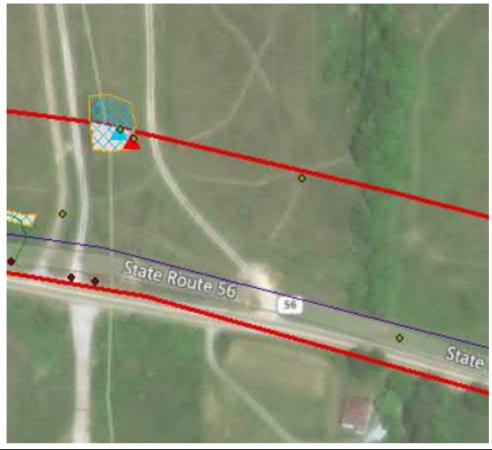
Background Information				
Stacey K Mueller				
10/1/2020				
AECOM				
525 Vine St., Ste. 1800, Cincinnati, OH 45202				
513-419-3450				
stacey.mueler@aecom.com				
Wetland 01				
PEM				
Depression				



Lat/Long or UTM Coordinate:	39.37965 -82.44673
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	050901010202 - West Branch Raccoon Creek
Site Visit:	10/1/2020
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3
Name of Wetland:	Wetland 01

0.04 vertaild Size (Letimated total acres): 0.09	Wetland Size (delineated acres):	0.04		0.09
--	----------------------------------	------	--	------

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Sample point w-wrl-20201001-02-pem is point in to wetland W-WRL-20201001-02, a PEM wetland located in a depression, possibly old pond, in rolling hills landscape of reclaimed strip mine land. Wetland drains overland to flat area, potentially isolated. Wetland boundary fully delineated. Reclaimed strip mine land = significantly disturbed soils. One primary and two secondary hydrology indicators present. Primary source of hydrology is concentration of precipitation and surface runoff into shallow depression, having tussock growth herbaceous vegetation present. Wetland appears to be an old pond that has been partially filled in with no outlet present. Overflow water simply drains onto adjacent driveway. No obvious berm/dike/dam present. Potentially isolated.

Final score:	32	Category:	2

Wetland ID:	Wetland 01

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		X
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		X

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Wetland ID: Wetland 01

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated	YES	*NO
	during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b
We	tland ID: Wetland 01		•

	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the	YES	*NO	
	cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status. Go to Question 9a	Go to Question 9a	
Q 2	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less	VEC	ψN(O)	
Эd	than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	*NO Go to Question 10	
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the	YES	*NO	
	loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 9c	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	*NO	
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10	
9d	Does the wetland have a predominance of native species within its vegetation	YES	*NO	
	communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland Go to Question 10	Go to Question 9e	
9e	Does the wetland have a predominance of non-native or disturbance tolerant native	YES	*NO	
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	*NO Go to Question 10	
		Wetland should be evaluated for possible Category 3 status	Go to Question 10	
	plant species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status Go to Question 10 YES Wetland is a Category 3 wetland. Go to Question 11		
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality. Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or	Wetland should be evaluated for possible Category 3 status Go to Question 10 YES Wetland is a Category 3 wetland. Go to Question 11	Go to Question 10 *NO	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland should be evaluated for possible Category 3 status Go to Question 10 YES Wetland is a Category 3 wetland. Go to Question 11	*NO Go to Question 11	

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

AEP IIe	esboro 138 kV Project	Rater(s):	Stacey K Mueller		Date:	10/1/2020
	• **	(3)				
				Field ID:		
0.0	0.0 Metric 1. Wetl	•	•	W-WRL-20201010-02		
subtotal	>50 acres (>20.2ha) (е.			
	25 to <50 acres (10.1 10 to <25 acres (4 to -	to <20.2ha) (5 pts)		Delineated acres:	0.04	1
	3 to <10 acres (1.2 to	<4ha) (3 pts)		Total acres:	0.09	
	0.3 to <3 acres (0.12 t	to <0.12ha) (1 pt				
	x <0.1 acres (0.04ha) (0	pts)				
.0	3.0 Metric 2. Upla	nd buffers a	and surroundin	g land use.		
subtotal				gn score. Do not double check.		
			ore around wetland peri (82 to <164ft) around w			
	NARROW. Buffers av	erage 10m to <25r	n (32ft to <82ft) around (<32ft) around wetland	vetland perimeter (1)		
	2b. Intensity of surro	unding land use.	Select one or double	check and average.		
			orairie, savannah, wildlit oung second growth for			
	x MODERATELY HIGH	. Residential, fence	ed pasture, park, conser	vation tillage, new fallow field. (3)		
	HIGH. Urban, industri	al, open pasture, re	ow cropping, mining, cor	struction. (1)		
.0 1	5.0 Metric 3. Hydr	ology.				
subtotal	3a. Sources of Water	. Score all that a	pply.	3b. Connectivity. Score all th	nat apply.	
	High pH groundwater Other groundwater (3)		F	100 year floodplain (1) Between stream/lake and othe	ar human use (1)	
	x Precipitation (1)			Part of wetland/upland (e.g. fo	rest), complex (1)	
	Seasonal/Intermittent Perennial surface wat	er (lake or stream)		x Part of riparian or upland corric 3d. Duration inundation/satu		bl check.
	3c. Maximum water (>0.7 (27.6in) (3)	lepth. Select one	-	Semi- to permanently inundate Regularly inundated/saturated		
	0.4 to 0.7m (15.7 to 2) x <0.4m (<15.7in) (1)	7.6in) (2)		X Seasonally inundated (2) Seasonally saturated in upper		
	3e. Modifications to		c regime. Score one o	double check and average.		
	None or none apparer x Recovered (7)	IT (12)		Check all disturbances obse	point source (nonsto	rmwater)
	Recovering (3) Recent or no recovery	(1)	-	tile dike	x filling/grading road bed/RR track	
			F	weir stormwater input	dredging x Other: strip mining	
			_			
.0 2			n and Develop			
subtotal	4a. Substrate disturb		or double check and a	verage.		
	x Recovered (3) Recovering (2)	. /				
	Recent or no recovery					
	Excellent (7)	nent. Select only	one and assign score.			
	Very good (6) Good (5)					
	Moderately good (4) x Fair (3)					
	Poor to fair (2)					
			uble check and avera			
	None or none apparer x Recovered (6)	nt (9)	Γ	Check all disturbances observed mowing	ed shrub/sapling remov	al
	Recovering (3) Recent or no recovery	(1)	ļ	grazing clearcutting	herbaceous/aquatic	
	INGCGIR OF NO TECOVERY	(1)	ţ	x selective cutting	dredging	
			ŀ	woody debris removal toxic pollutants	farming nutrient enrichment	
			_	_		
	27.0					
subtotal this	page ORAM v. 5.0 Field Fo	rm Quantitative Ra	ting			

Wetla	nd ID:	Wetland 01					
Site:	AEP Ilesbo	oro 138 kV Project	Rater(s):	Sta	cey K Mueller	Date:	10/1/2020
					Field ID:		
	27.0				W-WRL-20201010-02		
	subtotal this page						
0	.0 27.0	Metric 5. Special We	tlands.				
max 10 pts.	subtotal	Check all that apply and					
		Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetla Lake Erie coastal/tributary wetla Lake Plain Sand Prairies (Oak C Relict Wet Praires (10) Known occurrence state/federal Significant migratory songbird/w Category 1 Wetland. See Quest	nd-unrestricted hydrology (nd-restricted hydrology (5) ppenings) (10) threatened or endangered ater fowl habitat or usage (species	(10)		
		<u> </u>					
	32.0	Metric 6. Plant comr	•	rsion		v Cavan Caala	
max 20pts.	subtotal	6a. Wetland Vegetation Score all present using 0 to 3 sc		٥	Vegetation Communit Absent or comprises <0.1ha (0		
	Г	Aquatic bed	aic.	1	Present and either comprises		
		2 Emergent			vegetation and is of moderate		
		0 Shrub			significant part but is of low qu		
	-	Forest Mudflats		2	Present and either comprises		
	-	Open water			vegetation and is of moderate part and is of high quality	quality of comprises a small	
	F	Other		3		cant part, or more, of wetland's 3	
	L	6b. horizontal (plan view) Inter	rspersion.	Ü	vegetation and is of high qualit		
	F	Select only one.			Normative Decemention of Van	atation Quality	
	-	High (5) Moderately high(4)			Narrative Description of Veg Low spp diversity and/or predo		
	F	Moderate (3)			disturbance tolerant native spe		
		Moderately low (2)			Native spp are dominant comp		
		Low (1)			although nonnative and/or dist		
		x None (0)			can also be present, and spec		
		6c. Coverage of invasive plant			moderately high, but generally		
		Table 1 ORAM long form for list or deduct points for coverage	. Add		threatened or endangered spp A predominance of native spec		
	Г	Extensive >75% cover (-5)			and/or disturbance tolerant na		
		Moderate 25-75% cover (-3)			absent, and high spp diversity		
		Sparse 5-25% cover (-1)			the presence of rare, threatened	ed, or endangered spp	
		Nearly absent <5% cover (0)			•		
	L	x Absent (1)			Mudflat and Open Water Cla	ss Quality	
		6d. Microtopography. Score all present using 0 to 3 so	ala	1	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47	(acros)	
	Г	Vegetated hummucks/tussucks	ale.		Moderate 1 to <4ha (2.47 to 9.		
	F	Coarse woody debris >15cm (6i)	n)		High 4ha (9.88 acres) or more		
	F	0 Standing dead >25cm (10in) dbl					
		Amphibian breeding pools		_	Microtopography Cover Sca	le	
				0	Absent	16	
				1	Present very small amounts or of marginal quality	ir more common	
				2	Present in moderate amounts,	but not of highest	
	32 0	TOTAL (Max 100 pts)		-		ŭ	
					quality or in small amounts of I	· · · · · · · · · · · · · · · · · · ·	
L	2	Category		3	Present in moderate or greate	ramounts	
					and of highest quality		

Wetland ID: Wetland 01

ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	*NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		0	
	Metric 2. Buffers and surrounding land use	í	3	
	Metric 3. Hydrology	1	2	
	Metric 4. Habitat	1	.2	
	Metric 5. Special Wetland Communities		0	
	Metric 6. Plant communities, interspersion, microtopography	4	5	
	TOTAL SCORE	3	32	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID: Wetland 01

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	*NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	*YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria		Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
OR habitat, OR recreational undercategorized by		*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
		Final Categor	y
Ch	oose one Category	1 *Category 2	Category 3



PHOTOGRAPHIC RECORD WETLANDS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No. 60624128

Wetland 01

Date:

October 01, 2020

Description:

PEM

Category 2

Facing North



Wetland 01

Date:

October 01, 2020

Description:

PEM

Category 2

Facing East





PHOTOGRAPHIC RECORD WETLANDS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No. 60624128

Wetland 01

Date:

October 01, 2020

Description:

PEM

Category 2

Facing South



Wetland 01

Date:

October 01, 2020

Description:

PEM

Category 2

Facing West





PHOTOGRAPHIC RECORD WETLANDS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No. 60624128

Wetland 01

Date:

October 01, 2020

Description:

PEM

Category 2

Soil Pit



Wetland 02

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Ilesboro 138 kV Project / Wetland w-wrl-20201001-0	O1 City/County: Vinton Sampling Date: 01-Oct-20
Applicant/Owner: AEP	State: OH Sampling Point: -WRL-20201001-01-PE
Investigator(s): WRL, SKM	Section, Township, Range: S 3 T 12N R 17W
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, convex, none): concave Slope: 1.0 % / 45.0 °
Subregion (LRR or MLRA): LRR N L	_at.: 39.37938
Soil Map Unit Name: Bhv1B - Bethesda silt loam, 0 to 8 percent	slopes, reclaimed NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time	of year? Yes No (If no, explain in Remarks.)
	icantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation . , Soil . , or Hydrology . natura	ally problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes • No •	Is the Sampled Area Yes No
Wetland Hydrology Present? Yes No	within a Wetland?
mine land. Drains to south to small UDF that drains to culvert u provide downstream connection. Wetland boundary fully delined	ewrl-20201001, a PEM wetland located in a depression in rolling hills of reclaimed strip nder roadway to open pasture; no downstream feature apparent, but culvert could ated. Reclaimed strip mine land = significantly disturbed soils.
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that app	
	Plants (B14)
	cospheres along Living Roots (C3) Moss Trim Lines (B16)
	Reduced Iron (C4) Dry Season Water Table (C2)
Sediment Deposits (B2)	Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift deposits (B3)	
	n in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations:	
Surface Water Present? Yes O No O Depth (inch	es):0
Water Table Present? Yes O No O Depth (inch	es):
Saturation Present? (includes capillary frings) Yes No Depth (inch	Wetland Hydrology Present? Yes No ○ No ○
Describe Recorded Data (stream gauge, monitoring well, aerial p	photos, previous inspections), if available:
Remarks:	
	location as a drainage swale leading into UDF to roadway culvert; no down-
	connection. Primary source of hydrology is concentration surface runoff into
depression area.	

VEGETATION (Five/Four Strata) - Use scientific names of plants.

			ominant		Sampling Point: W-WRL-20201001-01-P
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Re	ecies? = el.Strat. over	Indicator Status	Dominance Test worksheet: Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC: 3 (A)
2	0		0.0%		Total Number of Dominant
3			0.0%		Species Across All Strata: 3 (B)
4	0		0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6			0.0%		That Are OBE, FACW, OF FAC.
7			0.0%		Prevalence Index worksheet:
8		Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius	0	= To	otal Cover		0BL speci es x 1 =
1. Platanus occidentalis	Б	✓	71.4%	FACW	FACW speci es 91 x 2 = 182
2. Sambucus nigra		✓	28.6%	FAC	FAC speci es <u>12</u> x 3 = <u>36</u>
3.			0.0%		FACU speci es $10 \times 4 = 40$
4			0.0%		UPL speci es x 5 =
5.			0.0%		Column Totals: <u>113</u> (A) <u>258</u> (B)
6.			0.0%		Prevalence Index = B/A =
7			0.0%		
8.			0.0%		Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
9			0.0%		✓ Dominance Test is > 50%
10			0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	tal Cover		Morphological Adaptations ¹ (Provide supporting
1	0	П	0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3.	0		0.0%		¹ Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7.			0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' radius)		= Tc	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4	80	✓	75.5%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding
^	10	\Box	9.4%	FAC	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb stratum – Consists of all herbaceous (non-woody) plants,
Conoclinium coelestinum Solidago altissima	5	\Box	4.7%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
4. Juncus effusus	5		4.7%	FACW	Woody vines – Consists of all woody vines greater than 3.28 ft
5 Apocynum cannabinum	3		2.8%	FACU	in height.
6. Lespedeza cuneata	2		1.9%	FACU	Eiva Vagatation Strata
7. Epilobium coloratum	1		0.9%	FACW	Five Vegetation Strata:
8.	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11.	0		0.0%		3 in. (7.6 cm) DBH.
12.	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' radius)	106	= To	tal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1.	0		0.0%		including herbaceous vines, regardless of size, and woody
2	0	\Box	0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
	0	\Box	0.0%		Woody vines – Consists of all woody vines, regardless of
3 4	0		0.0%		height.
5	0	\Box	0.0%		
6	0	\Box	0.0%		Hydrophytic Vegetation
J		 = To	otal Cove		Present? Yes No
Demarks: (Include phote numbers here or on a cont					I
Remarks: (Include photo numbers here or on a separate sheethydrophytic vegetation indicators present, dominance test=100%, dominance te		cies	are FACW	and FAC.	

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS. US Army Corps of Engineers

Soil Sampling Point: W-WRL-20201001-01-P

	iption: (De		the depth	needed to				ifirm the a	absence of indicators)	
Depth Matrix (inches) Color (moist) %		Redox Features Color (moist) % Type 1 Loc2					T. J				
(inches) 0-3	10YR	4/3	100	COIOF	(HOISL)	%	_Tvpe_	Loc ²	Texture Sandy Loam	Remarks	
3-5	10YR	3/2	70	10YR	3/4	20	C		Sandy Loam	·,	
	10110			10YR	5/6	10			- Sandy Edam	· · · · · · · · · · · · · · · · · · ·	
	10VD	2/1	100	1011	3/0			TVI	candy	coal fines	
5-7	10YR	2/1	100						sandy	<u>`</u>	
7-11	10YR	5/4	70	10YR	5/6	30	C	M	Sandy Clay	· · ·	
										<u> </u>	
							•		`	·	
										·	
										· · · · · · · · · · · · · · · · · · ·	
Type: C=Cond	centration. I	D=Depletio	on. RM=Redu	uced Matrix,	CS=Cover	ed or Coate	ed Sand Grai	ns ² Loca	tion: PL=Pore Lining. N	M=Matrix	
Hydric Soil I									Indicators for Pi	roblematic Hydric Soils ³ :	
Histosol (A					k Surface	. ,	() (1.11		2 cm Muck (A10) (MLRA 147)	
Histic Epip				_			(S8) (MLRA		Coast Prairie	Redox (A16)	
Black Histi	ic (A3) Sulfide (A4)					MLRA 147, 1	4ŏ)	(MLRA 147,1	. ,	
	Sullide (A4 Layers (A5)				ny Gleyed leted Matr	l Matrix (F2)	J			odplain Soils (F19)	
_	k (A10) (LR					urface (F6)			(MLRA 136, 147) ☐ Very Shallow Dark Surface (TF12) ✔ Other (Explain in Remarks)		
_	Below Dark	,	\11\			Surface (F	7)				
·	k Surface (<i>F</i>	•	(11)			sions (F8)	,		✓ Other (Expla	in in Remarks)	
	ck Mineral (N.	☐ Iron	i-Mangane	se Masses	(F12) (LRR N	١,			
MLRA 147		,- , (=	-,		RA 136)						
Sandy Gle	yed Matrix	(S4)					LRA 136, 12		³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
Sandy Red							s (F19) (MLR				
Stripped N	Matrix (S6)			Rec	Parent M	aterial (F21) (MLRA 127	, 147)	unless disturbed or problematic.		
Restrictive La	ayer (if ob	served):									
Туре:											
Depth (inch	nes):								Hydric Soil Preser	it? Yes • No O	
Remarks:									1		
hovel refusa	l at 11" du	ue to rock	k. Significar	ntly disturb	ed soils a	as reclaime	ed mine lar	nd, showii	ng coal fines in narro	w layer 5-7" below surface,	
educed matr	ix (low ch	roma, lov	v value) ab	ove 5" sho	ws evide	nce of hyd	dric soil ind	icator dev	velopment.		

Upland 02

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Ilesboro 138 kV Project / Wetk	and w-wrl-20201001-01 City/0	County: Vinton	Sampling Date: 01-Oct-20
Applicant/Owner: AEP		State: OH	Sampling Point: JPL-WRL-20201001-02
Investigator(s): WRL, SKM	Secti	ion, Township, Range: S 3	T 12N R 17W
Landform (hillslope, terrace, etc.): Undulati	ng Local r	relief (concave, convex, none)	: <u>convex</u> Slope: <u>2.0</u> % / <u>63.4</u> °
Subregion (LRR or MLRA): LRR N	Lat.: 39.37	943 Long.: _	-82.44737 Datum: NAD83
Soil Map Unit Name: Bhv1B - Bethesda silt lo	am, 0 to 8 percent slopes, recl	aimed	NWI classification: None
Are climatic/hydrologic conditions on the site t	:ypical for this time of year?	Yes ● No ○ (If no, expl	lain in Remarks.)
Are Vegetation 🔲 , Soil 🗹 , or Hydro			umstances" present? Yes 💿 No 🔾
Are Vegetation 🔲 , Soil 🗌 , or Hydr	ology 🔲 naturally problem	atic? (If needed, expla	ain any answers in Remarks.)
		ing point locations, t	ransects, important features, etc.
Hydrophytic Vegetation Present? Yes			
Hydric Soil Present? Yes		Is the Sampled Area Yes	○ No ●
Wetland Hydrology Present? Yes	No •	within a Wetland?	
Located on reclaimed mine land = significan Hydrology	tly disturbed soils		
Wetland Hydrology Indicators:		Seco	ondary Indicators (minimum of two required)
Primary Indicators (minimum of one required			Surface Soil Cracks (B6)
Surface Water (A1)	☐ True Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Saturation (A3)	☐ Hydrogen Sulfide Odor (C1☐ Oxidized Rhizospheres alor		Drainage Patterns (B10) Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron		Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in T		Crayfish Burrows (C8)
Drift deposits (B3)	Thin Muck Surface (C7)		Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	·	Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)☐ Inundation Visible on Aerial Imagery (B7)			Geomorphic Position (D2) Shallow Aquitard (D3)
Water-Stained Leaves (B9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)			FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes No No) Depth (inches):		
Water Table Present? Yes No •			
Saturation Present? (includes capillary frings) Yes No No No Very No No Very No Very No No No Very No No No No No No No No	` ′	Wetland Hydrolog	y Present? Yes ○ No •
(includes capillary fringe) Describe Recorded Data (stream gauge, mon		ious inspections) if available:	
Describe Necorded Data (stream gauge, mon	torning well, derial photos, prov		
Remarks:			
No hydrology indicators present.			

Upland 02

VEGETATION (Five/Four Strata) - Use scientific names of plants.

			ominant		Sampling Point: <u>UPL-WRL-20201001-02</u>
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Re	pecies? = el.Strat. over	Indicator Status	Dominance Test worksheet:
1	0		0.0%		Number of Dominant Species That are OBL, FACW, or FAC: O (A)
2			0.0%		
3.	0		0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4			0.0%		Species reliass rill strata.
5			0.0%		Percent of dominant Species
6			0.0%		That Are OBL, FACW, or FAC: 0.0% (A/B)
		\Box	0.0%		Prevalence Index worksheet:
7			0.0%		Total % Cover of: Multiply by:
8	_	ш _ т	otal Cover		
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius	0	- 10	otal cover		
1. Prunus serotina	2	✓	100.0%	FACU	FACW speci es x 2 =
2.			0.0%	`	FAC speci es $\underline{29}$ x 3 = $\underline{87}$
3.		\Box	0.0%		FACU speci es $\frac{78}{}$ x 4 = $\frac{312}{}$
		\Box	0.0%		UPL species $\frac{6}{}$ x 5 = $\frac{30}{}$
4			0.0%		Col umn Total s: 113 (A) 429 (B)
5			0.0%		
6					Prevalence Index = B/A = 3.796
7			0.0%		Hydrophytic Vegetation Indicators:
8			0.0%		Rapid Test for Hydrophytic Vegetation
9			0.0%		☐ Dominance Test is > 50%
10	0		0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= To	otal Cover		Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%	`	Problematic Hydrophytic Vegetation ¹ (Explain)
3.	0		0.0%		¹ Indicators of hydric soil and wetland hydrology must
4		\Box	0.0%		be present, unless disturbed or problematic.
			0.0%		Definition of Vegetation Strata:
5			0.0%		Four Vegetation Strata:
6					Tree stratum – Consists of woody plants, excluding vines, 3 in.
7			0.0%		(7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: <u>5' radius</u>)			otal Cover		of height. Sapling/shrub stratum – Consists of woody plants, excluding
1. Lespedeza cuneata	60	✓	54.1%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Eupatorium serotinum	15		13.5%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Solidago altissima	15		13.5%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
4. Setaria pumila	5		4.5%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Conoclinium coelestinum	5		4.5%	FAC	in height.
6. Sonchus oleraceus	3		2.7%	UPL	Eivo Vogotation Strata
7. Daucus carota	3		2.7%	UPL	Five Vegetation Strata:
8. Symphyotrichum pilosum	3		2.7%	FAC	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9. Conyza canadensis	1		0.9%	FACU	diameter at breast height (DBH).
10. Vernonia gigantea	1	\Box	0.9%	FAC	Sapling stratum – Consists of woody plants, excluding woody
11.	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody
	_	ات To	otal Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' radius)					Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
1	0	Ш	0.0%		species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines - Consists of all woody vines, regardless of
4.	0		0.0%		height.
5.	0		0.0%		
6	0		0.0%		Hydrophytic Vegetation
J.,	0	= T	otal Cove	r	Present? Yes No •
December (In the Institute of I					I
Remarks: (Include photo numbers here or on a separate shee	€τ.)				
No hydrophytic vegetation indicators present; dominance test = 0% ,	domir+		00 000 EAO	I proved-	as index . 2.0

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Upland 02 Soil

Soil Sampling Point: UPL-WRL-20201001-02

Depth <u>Matrix</u>	Redox Features	
nches) Color (moist) 9	Color (moist) % Type Loc2	
0-4 10YR 4/3 100		Sandy Loam
4-9 2.5Y 4/4 70	2.5y 5/2 30 RM M	Sandy Clay
		· · · · · · · · · · · · · · · · · · ·
		· · · · · · · · · · · · · · · · · · ·
pe: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS=Covered or Coated Sand Grains 2Loca	tion: PL =Pore Lining, M=Matrix
dric Soil Indicators:	Treates manny of several of search carry series	
Histosol (A1)	☐ Dark Surface (S7)	Indicators for Problematic Hydric Soils ³ :
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,148)	2 cm Muck (A10) (MLRA 147)
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147,148)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	☐ Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)	
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148)	³ Indicators of hydrophytic vegetation and
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)	wetland hydrology must be present, unless disturbed or problematic.
strictive Layer (if observed):		
Type:		Hydric Soil Present? Yes No (
Type:		Hydric Soil Present? Yes No •
Type:		
Type:	cantly disturbed soils as reclaimed mine land, though	
Type:	cantly disturbed soils as reclaimed mine land, though	
Type:	cantly disturbed soils as reclaimed mine land, though	
Type:	cantly disturbed soils as reclaimed mine land, though	
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Type:	cantly disturbed soils as reclaimed mine land, though	
Type:	cantly disturbed soils as reclaimed mine land, though	
Type:	cantly disturbed soils as reclaimed mine land, though	

Background Information		
Name:	Stacey K Mueller	
Date:	10/1/2020	
Affiliation:	AECOM	
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202	
Phone Number:	513-419-3450	
e-mail address:	stacey.mueler@aecom.com	
Name of Wetland:	Wetland 02	
Vegetation Communit(ies):	РЕМ	
HGM Class(es):	Depression	

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate:	39.37938 -82.44739
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	050901010202 - West Branch Raccoon Creek
Site Visit:	10/1/2020
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	Wetland 02		
Wetland Size (delineated acres):	0.06	Wetland Size (Estimated total acres):	0.06

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Sample point w-wrl-20201001-01-pem is point in to wetland w-wrl-20201001, a PEM wetland located in a depression in rolling hills of reclaimed strip mine land. Drains to south to small UDF that drains to culvert under roadway to open pasture, no feature present downstream. Wetland boundary fully delineated. Reclaimed strip mine land = significantly disturbed soils.

No primary and 2 secondary hydrology indicators present due to location as a drainage swale leading into UDF to roadway culvert; no feature downstream apparent, but culvert could provide downstream connection. Primary source of hydrology is concentration surface runoff into depression area.

Final score:	34.5	Category:	1 or 2 Gray Zone

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	Х	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		Х
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		X

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the	YES	*NO
	cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status. Go to Question 9a	Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	*NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	*NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	*NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	*NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant	YES	*NO
	species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton,	YES	*NO
10	Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or	YES	*NO
	all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating
	western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).		

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

— T. –	n	T- :	lo: ::		T_	1
e: AE	P Ilesboro 138 kV Project	Rater(s):	Stacey K Mueller		Date:	10/1/2020
				Field ID:		
0.0	0.0 Metric 1.	Wetland Area (s	size).	W-WRL-20201010-01		
6 pts subto	Select one siz	e class and assign sco	re.			
	>50 acres (>20 25 to <50 acres	.2ha) (6 pts) s (10.1 to <20.2ha) (5 pts)	Delinested seves	0.00	7
	10 to <25 acres	s (4 to <10.1ha) (4 pts) (1.2 to <4ha) (3 pts)	,	Delineated acres:	0.06	
	0.3 to <3 acres	(0.12 to <1.2ha) (2pts) es (0.04 to <0.12ha) (1 p	1)	Total acres:	0.06	
	x <0.1 acres (0.0		.,			
6.0	6.0 Metric 2.	Inland buffers	and surrounding	n land use		
14 pts. subto		•	`	gn score. Do not double check	t.	
•	WIDE. Buffers	average 50m (164ft) or n	nore around wetland perio	neter (7)		
	NARROW. Buf	fers average 10m to <25	n (82 to <164ft) around we m (32ft to <82ft) around w	vetland perimeter (1)		
		-	n (<32ft) around wetland . Select one or double o			
	VERY LOW. 21	nd growth or older forest,	prairie, savannah, wildlife	e area, etc. (7)		
			young second growth fore ed pasture, park, conserved	est. (5) /ation tillage, new fallow field. (3		
			row cropping, mining, con		•	
11.0	17.0 Metric 3.	Hydrology.				
ots. subto	stal 3a. Sources o	Water. Score all that a	pply.	3b. Connectivity. Score al	I that apply.	
	High pH ground Other groundw			100 year floodplain (1) Between stream/lake and or	ther human use (1)	
	x Precipitation (1		-	Part of wetland/upland (e.g. x Part of riparian or upland co	forest), complex (1)	
	Perennial surfa	ce water (lake or stream		3d. Duration inundation/s	aturation. Score one or d	lbl check.
	>0.7 (27.6in) (3		· _	Semi- to permanently inund Regularly inundated/saturat		
	0.4 to 0.7m (15 x <0.4m (<15.7in	.7 to 27.6in) (2)) (1)	_	x Seasonally inundated (2) x Seasonally saturated in upp	er 30cm (12in) (1)	
	3e. Modification		ic regime. Score one or	double check and average. Check all disturbances of	served	
	x Recovered (7)	apparent (12)	E	ditch	point source (nonste	ormwater)
	Recovering (3) Recent or no re	ecovery (1)	-	dike	x filling/grading road bed/RR track	
				weir stormwater input	dredging x Other: strip mining	J
40 FI						
12.5			on and Developi			
) pts. subto	tal 4a. Substrate None or none a		or double check and a	verage.		
	x Recovered (3) Recovering (2)					
	Recent or no re					
	Excellent (7)	velopment. Select only	one and assign score.			
	Very good (6) x Good (5)					
	Moderately god	od (4)				
	Fair (3) Poor to fair (2)					
	Poor (1) 4c. Habitat alt	eration. Score one or d	ouble check and averag			
	None or none a		_	Check all disturbances obse	shrub/sapling remover	val
	x Recovering (3)	200,400,41	<u> </u>	grazing	herbaceous/aquatic	
	Recent or no re	ecovery (1)	-	clearcutting selective cutting	sedimentation dredging	
			F	woody debris removal toxic pollutants	farming nutrient enrichment	

ORAM v. 5.0 Field Form Quantitative Rating

14/-4/-	ad ID.	N4. (1 1.00					
Wetla	na iv:	Wetland 02					
Site:	AFP llesbore	o 138 kV Project	Rater(s):	Sta	acey K Mueller	Date:	10/1/2020
Oito.	ALI NOODON	0 100 KV 1 10J00t	rtator(o).	Ott	locy it ividelici	Dato.	10/1/2020
					Field ID:		
	29.5				W-WRL-20201010-01		
	subtotal this page						
	.0 29.5	Matria E Chaoial Wa	tlanda				
		Metric 5. Special We Check all that apply and					
max 10 pts.	subtotal		i score as muicateu.				
		Fen (10)					
		Old growth forest (10)					
	_	Mature forested wetland (5) Lake Erie coastal/tributary wetlar	nd-unrestricted hydrology (10)			
		Lake Erie coastal/tributary wetlar		10)			
		Lake Plain Sand Prairies (Oak O	penings) (10)				
		Relict Wet Praires (10) Known occurrence state/federal	threatened or andangered	cnocioc	(10)		
		Significant migratory songbird/wa			(10)		
		Category 1 Wetland. See Questi					
5	.0 34.5	Metric 6. Plant comn	nunities, interspe	rsior			
max 20pts.	subtotal	6a. Wetland Vegetation C			Vegetation Communit		
		Score all present using 0 to 3 sc	ale.	0	Absent or comprises <0.1ha (0		
	2	Aquatic bed Emergent		1	Present and either comprises vegetation and is of moderate		
		Shrub			significant part but is of low qu		
		Forest		2	Present and either comprises	significant part of wetland's 2	
		Mudflats			vegetation and is of moderate	quality or comprises a small	
	_	Open water Other		3	part and is of high quality Present and comprises signific	cant part, or more, of wetland's 3	
		6b. horizontal (plan view) Inter	rspersion.	·	vegetation and is of high quali		
	·	Select only one.					
	<u> </u>	High (5) Moderately high(4)			Narrative Description of Veg Low spp diversity and/or prede		
		Moderate (3)			disturbance tolerant native spe		
		Moderately low (2)			Native spp are dominant comp	conent of the vegetation, mod	
	x	Low (1)			although nonnative and/or dist		
		None (0) 6c. Coverage of invasive plant	s Refer		can also be present, and spec moderately high, but generally		
		Table 1 ORAM long form for list.			threatened or endangered spp		
		or deduct points for coverage			A predominance of native spe		
		Extensive >75% cover (-5) Moderate 25-75% cover (-3)			and/or disturbance tolerant na absent, and high spp diversity		
		Sparse 5-25% cover (-1)			the presence of rare, threaten		
		Nearly absent <5% cover (0)					
	х	Absent (1)			Mudflat and Open Water Cla	ss Quality	
		6d. Microtopography. Score all present using 0 to 3 sci	ale	<u>0</u>		7 acres)	
	1	Vegetated hummucks/tussucks	aio.	2	Moderate 1 to <4ha (2.47 to 9		
		Coarse woody debris >15cm (6ir		3	High 4ha (9.88 acres) or more	,	
		Standing dead >25cm (10in) dbh Amphibian breeding pools	ו		Microtopography Cover Sca	le.	
	_ 0	Tumbumpian preeding hoops		0	Absent Cover Sca	iie	
				1	Present very small amounts of	r if more common	
					of marginal quality	but not of highest	
	24 5	TAL (May 400 mts)		2	Present in moderate amounts,		
<u> </u>		OTAL (Max 100 pts)			quality or in small amounts of	-	
1 or 2	Gray Zone Ca	tegory		3	Present in moderate or greate	r amounts	

and of highest quality

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	*NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	(0	
	Metric 2. Buffers and surrounding land use	(6	
	Metric 3. Hydrology	1	1	
	Metric 4. Habitat	12	2.5	
	Metric 5. Special Wetland Communities	(0	
	Metric 6. Plant communities, interspersion, microtopography		5	
	TOTAL SCORE	34	1.5	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	Wetland 02
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	*NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	*YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
		Final Categor	v
			<u></u>



Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No. 60624128

Wetland 02

Date:

October 01, 2020

Description:

PEM

Category 2

Facing North



Wetland 02

Date:

October 01, 2020

Description:

PEM

Category 2

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No. 60624128

Wetland 02

Date:

October 01, 2020

Description:

PEM

Category 2

Facing South



Wetland 02

Date:

October 01, 2020

Description:

PEM

Category 2

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No. 60624128

Wetland 02

Date:

October 01, 2020

Description:

PEM

Category 2

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP llesboro 138 kV Project	/ Wetland w-wrl-20200930-01	City/County: Vinton	Sampling Date: 3	0-Sep-20	
Applicant/Owner: AEP		State:	OH Sampling Point: -WRL-:	20200930-01-PF	
Investigator(s): WRL, SKM		Section, Township, Range:	S 3 T 12N R 1	17W	
Landform (hillslope, terrace, etc.): Va	alley bottom	Local relief (concave, convex	r, none): concave Slope: 3	.0_ % /_ 71.6 °	
Subregion (LRR or MLRA): LRR N	Lat.:	39.38446 L		um: NAD83	
Soil Map Unit Name: WhL1E1 - Wharto			NWI classification: PFO1C		
Are climatic/hydrologic conditions on th			no, explain in Remarks.)		
		`	nal Circumstances" present? Yes	No O	
			iai Circumstances present?		
Are Vegetation 🔲 , Soil 🗹 , o	r Hydrology 🔲 naturally pr	roblematic? (If neede	d, explain any answers in Remarks.)		
Summary of Findings - Attac	ch site map showing sa	ampling point location	ons, transects, important fe	atures, etc.	
Hydrophytic Vegetation Present? Y	res O No O				
	es ● No ○	Is the Sampled Area			
	res ● No ○	within a Wetland?	Yes ● No ○		
Remarks:					
	oint in to wetland W-WRL-2020	0930-01, somewhat open PF	O wetland in small valley bottom; obv	iously affected	
by acid mine ruonff and sedimentation	n, drains to east to stream S-W	RL-20200930-04 with pH m	easured at 2.8. Historical USGS topogra	aphic maps	
			strip mine activities, acid mine drainaging reddish colors. Wetland boundary		
Thierobial soil activities, from deposition	Thom acidined groundwater at	. запаселаррен таует ртезеп	ing reduish colors. Wetland bodhdary	runy denneated.	
Hydrology					
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two	required)	
Primary Indicators (minimum of one re	equired; check all that apply)		Surface Soil Cracks (B6)		
Surface Water (A1)	True Aquatic Plants	(B14)	Sparsely Vegetated Concave Surface (B8)		
✓ High Water Table (A2)	✓ Hydrogen Sulfide O	, ,	✓ Drainage Patterns (B10)		
Saturation (A3)	_	res along Living Roots (C3)	Moss Trim Lines (B16)		
Water Marks (B1) ✓ Sediment Deposits (B2)	☐ Presence of Reduce	, ,	Dry Season Water Table (C2)		
Drift deposits (B3)	Thin Muck Surface	ion in Tilled Soils (C6)	d Soils (C6) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain in Re	,	Stunted or Stressed Plants (D1)		
☐ Iron Deposits (B5)	Utilet (Explain in Ne	smarks)	✓ Geomorphic Position (D2)		
☐ Inundation Visible on Aerial Imagery (B	7)		Shallow Aquitard (D3)		
Water-Stained Leaves (B9)			☐ Microtopographic Relief (D4)		
Aquatic Fauna (B13)			✓ FAC-neutral Test (D5)		
Field Observations: Surface Water Present? Yes	No O Depth (inches):	1			
_					
	No O Depth (inches):	5 Wetland H	ydrology Present? Yes No		
Saturation Present? (includes capillary fringe) Yes	No Depth (inches):	0			
Describe Recorded Data (stream gauge	e, monitoring well, aerial photos	s, previous inspections), if av	railable:		
Remarks:					
Multiple primary and secondary hydrologas evidenced by pH=2.8 reading in stre					
Creek, which drains southeast to Racoo				ranen Nacoon	

VEGETATION (Five/Four Strata) - Use scientific names of plants.

			ominant		Sampling Point: W-WRL-20200930-01-P
Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet: Number of Dominant Species
1. Quercus bicolor	15	✓,	45.5%	FACW	That are OBL, FACW, or FAC: 5 (A)
2. Betula nigra	10	✓,	30.3%	FACW	Tatal Number of Descious
3. Quercus palustris	5		15.2%	FACW	Total Number of Dominant Species Across All Strata: 5 (B)
4. Acer rubrum	3		9.1%	FAC	
5.	0		0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
6	0		0.0%		That Are OBL, FACW, or FAC: 100.0% (A/B)
7	0		0.0%		Prevalence Index worksheet:
8			0.0%		Total % Cover of: Multiply by:
	33	= To	otal Cover	-	0BL speci es
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius	10		FF (0)	FACIAL	FACW species 59 x 2 = 118
1. Quercus bicolor		✓	55.6%	FACW	FAC speci es 10 x 3 = 30
2. Oxydendrum arboreum			16.7%	UPL	FACU speci es 0 x 4 = 0
3. Lindera benzoin		Ц,	16.7%	FAC	UPL species $\frac{3}{2} \times 5 = \frac{15}{2}$
4. Ulmus americana		Ц,	11.1%	FACW	(5)
5			0.0%		(1)
6			0.0%		Prevalence Index = B/A = <u>2.264</u>
7		\square	0.0%		Hydrophytic Vegetation Indicators:
8		\square	0.0%		✓ Rapid Test for Hydrophytic Vegetation
9		\square	0.0%		✓ Dominance Test is > 50%
10		\sqcup	0.0%		✓ Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	18	= To	otal Cover	-	☐ Morphological Adaptations ¹ (Provide supporting
1			0.0%		data in Remarks or on a separate sheet)
2.	0		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3.			0.0%		¹ Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5			0.0%		Definition of Vegetation Strata:
6.	0		0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' radius)	0	= Tc	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
· ·	10	✓	47.6%	FACW	Sapling/shrub stratum – Consists of woody plants, excluding
Panicum dichotomiflorum	5		23.8%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Carex grayi	2		9.5%	FAC	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Rubus idaeus		H,	9.5%	FACW	Woody vines - Consists of all woody vines greater than 3.28 ft
Scirpus cyperinus Hypericum punctatum	2		9.5%	FAC	in height.
O.	0		0.0%	IAC	
6	0		0.0%		Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody
10					vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
11			0.0%		Shrub stratum – Consists of woody plants, excluding woody
12	0	LJ,	0.0%		vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' radius)	21	= 10	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1		Ц.	0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0	\square	0.0%		Woody vines – Consists of all woody vines, regardless of
4	0	\sqcup	0.0%		height.
5	0		0.0%		Hydrophytic
6	0		0.0%		Vegetation
	0	= To	otal Cove	r	Present? Yes Vivo
Remarks: (Include photo numbers here or on a separate she	et)		-		
Hydrophytic vegetation indicators present, Rapid Test, dominant spe		ACW	/		

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS. US Army Corps of Engineers

Soil Sampling Point: W-WRL-20200930-01-P

epth —		Matrix			dox Features	1 -	_		
	Color (m .5YR :	noist) 3/2	100	Color (moist)	%Tv	oe Loc²	Texture Sandy Loam	Remarks acid drainage iron	
						_		transport	
		3/4	100				Sand	· ·	
?-19 7	.5YR !	5/1	100				Clay	,	
		Depletion	n. RM=Redu	ced Matrix, CS=Covere	d or Coated San	d Grains ² Loo	cation: PL=Pore Lining. M=	-Matrix	
Iric Soil Indica Histosol (A1)	ators:			☐ Dark Surface (\$	`7\		Indicators for Pro	blematic Hydric Soils ³ :	
Histic Epipedon	(A2)				77) 7 Surface (S8) (1	MLRA 147.148)	2 cm Muck (A	10) (MLRA 147)	
Black Histic (A3				_	ce (S9) (MLRA		Coast Prairie R (MLRA 147,148		
Hydrogen Sulfic	de (A4)			Loamy Gleyed I				dplain Soils (F19)	
Stratified Layer				Depleted Matrix	` '		(MLRA 136, 14		
2 cm Muck (A10	, ,	•		Redox Dark Sur	, ,		Very Shallow [Dark Surface (TF12)	
Depleted Below			1)	Depleted Dark	, ,		✓ Other (Explain	in Remarks)	
Thick Dark Surf	,			Redox Depress		(LDD N			
Sandy Muck Mil MLRA 147, 148) (LRR N,		MLRA 136)	e Masses (F12)	(LKK IV,			
	ndy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122)		2						
Sandy Redox (S				Piedmont Floor	Iplain Soils (F19)	(MLRA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
Stripped Matrix	(S6)			Red Parent Ma	erial (F21) (MLF	RA 127, 147)	unless disturbed or problematic.		
rictive Layer	(if obser	rved):							
ype:							Hydric Soil Present	? Yes • No O	
Depth (inches):							i iyunc son Present	res © NO C	
ndwater from	potenti	al acid r	nine drain	age limiting microbia	al activity and	soils developr	ment. Very low chroma/	soils due to very low pH high value matrix begins at 7 ted organic breakdown.	

Upland 04

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Ilesboro 138 kV Project / Wetland w-wrl-2020093	30-01 City/County: Vinton Sampling Date: 30-Sep-20
Applicant/Owner: AEP	State: OH Sampling Point: JPL-WRL-20200930-01
Investigator(s): WRL, SKM	Section, Township, Range: S 3 T 12N R 17W
Landform (hillslope, terrace, etc.): Valley bottom	Local relief (concave, convex, none): convex Slope: 3.0 % / 71.6 °
Subregion (LRR or MLRA): LRR N	Lat.: 39.38723 Long.: -82.44999 Datum: NAD83
Soil Map Unit Name: WhL1E1 - Wharton-Latham silt loams, 2	5 to 40 percent slopes NWI classification: PFO1C
Are climatic/hydrologic conditions on the site typical for this til	me of year? Yes No (If no, explain in Remarks.)
	nificantly disturbed? Are "Normal Circumstances" present? Yes 💿 No 🔾
Are Vegetation . , Soil . , or Hydrology . nat	turally problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map show	ving sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No •	
Hydric Soil Present? Yes No •	Is the Sampled Area Yes O No •
Wetland Hydrology Present? Yes No •	within a Wetland?
boundary on rising slope at slightly higher elevation, not affective and the slope at slightly higher elevation, not affective and the slope at slightly higher elevation, not affective and the slope at slightly higher elevation, not affective and the slope at slightly higher elevation, not affective and the slope at slightly higher elevation, not affective and the slope at slightly higher elevation, not affective and the slope at slightly higher elevation, not affective and the slope at slightly higher elevation, not affective and the slope at slightly higher elevation, not affective and the slope at slightly higher elevation and the slightly higher elevation and t	ected by low-pH groundwater or acid mine drainage.
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that	
	atic Plants (B14) Sparsely Vegetated Concave Surface (B8) Sulfide Odor (C1) Drainage Patterns (B10)
	Rhizospheres along Living Roots (C3) Moss Trim Lines (B16)
	of Reduced Iron (C4) Dry Season Water Table (C2)
	on Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Cathering Visit Language (C0)
	Surface (C7) Saturation Visible on Aerial Imagery (C9) plain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9) Aquatic Fauna (B13)	☐ Microtopographic Relief (D4)
Field Observations:	FAC-neutral Test (D5)
Surface Water Present? Yes No Depth (i	inches):0
Water Table Present? Yes O No O Depth (i	nches):
Saturation Present? (includes capillary fringe) Yes No Depth (i	Wetland Hydrology Present? Yes ○ No ⑨
Describe Recorded Data (stream gauge, monitoring well, aeria	
Remarks:	
No hydrology indicators present.	
The figure oragin and account of the first orange of the first orange of the first orange or the first orange orange orange or the first orange	

Upland 04VEGETATION (Five/Four Strata) - Use scientific names of plants.

			ocios?		Sampling Point: UPL-WRL-20200930-01
(Olated a cool and a cool	Absolute	Re	ecies? - I.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30' radius)	% Cover		ver	Status	Number of Dominant Species
1. Quercus rubra		✓	53.3%	FACU	That are OBL, FACW, or FAC:3(A)
Liriodendron tulipifera	5		6.7%	FACU	Total Number of Dominant
Acer saccharum 4		\Box	0.7%	TAGG	Species Across All Strata: 6 (B)
5	_	\Box	0.0%		Percent of dominant Species
6.			0.0%		That Are OBL, FACW, or FAC: 50.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8.	0		0.0%		Total % Cover of: Multiply by:
	75	= To	tal Cover		0BL speci es x 1 =
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius)		40.007	F40	FACW species $3 \times 2 = 6$
1. Carpinus caroliniana	15	✓ ,	42.9%	FAC	FAC speci es 45 x 3 = 135
2. Acer saccharum		<u> </u>	28.6%	FACU FAC	FACU species $85 \times 4 = 340$
3. Smilax rotundifolia		H	14.3%	FAC	UPL speci es 0 x 5 = 0
4. Acer rubrum		H	0.0%	FAC	Col umn Total s:133 (A)481 (B)
5		Π,	0.0%		
6		\Box	0.0%		Prevalence Index = B/A = 3.617
7 8		\Box	0.0%		Hydrophytic Vegetation Indicators:
9		\Box	0.0%		Rapid Test for Hydrophytic Vegetation
10.	0	\Box	0.0%		☐ Dominance Test is > 50%
		= To	tal Cover		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)	0		0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1		H,	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
2		\Box	0.0%		¹ Indicators of hydric soil and wetland hydrology must
3 4	0	\Box	0.0%		be present, unless disturbed or problematic.
5		\Box	0.0%		Definition of Vegetation Strata:
6.		\Box	0.0%		Four Vegetation Strata:
7	0	\Box	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' radius)	0	= To	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4	15	✓	65.2%	FAC	Sapling/shrub stratum – Consists of woody plants, excluding
Rubus idaeus Symphyotrichum pilosum	5	✓	21.7%	FAC	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Cinna arundinacea	3	'n,	13.0%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4	0		0.0%		Woody vines – Consists of all woody vines greater than 3.28 ft
5	0		0.0%	`	in height.
6.	0		0.0%		Eiva Vagatation Strata
7	0		0.0%		Five Vegetation Strata: Tree - Woody plants, excluding woody vines, approximately 20
8.	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0		0.0%		diameter at breast height (DBH).
10	0		0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0		0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' radius)	23	= To	tal Cover	-	Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4.	0		0.0%		height.
5	0		0.0%		Llydrophytic
6.	0		0.0%		Hydrophytic Vegetation Present? Yes O No O
	0	= Tc	otal Cove		Present? Yes No
Remarks: (Include photo numbers here or on a separate she	et.)				

Upland 04 Soil

Soil Sampling Point: UPL-WRL-20200930-01

	h needed to document the indicator or confirm the a	absence of indicators.)
Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type 1 Loc2	Texture Remarks
0-18 10YR 4/3 100	COIOI (IIIOI317 20 IVDC ECC	very consistent, loose
0.00		soi i's
		`
		· · · · · · · · · · · · · · · · · · ·
		· · · · · · · · · · · · · · · · · · ·
	duced Matrix, CS=Covered or Coated Sand Grains 2Loca	tion: PL=Pore Lining. M=Matrix
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils 3 :
Histosol (A1)	☐ Dark Surface (S7)	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,148)	
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	Coast Prairie Redox (A16) (MLRA 147,148)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
☐ Thick Dark Surface (A12)	Redox Depressions (F8)	Other (Explain in Remarks)
	☐ Iron-Manganese Masses (F12) (LRR N,	
Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)	MLRA 136)	
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	3
Sandy Redox (S5)	☐ Piedmont Floodplain Soils (F19) (MLRA 148)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)	unless disturbed or problematic.
Restrictive Layer (if observed):		
Type:		
		Hydric Soil Present? Yes No
Depth (inches):		, , , , , , , , , , , , , , , , , , , ,
Remarks:		
No hydric soil indicators present.		

Background Information					
Name:	Josiah Kleinhenz				
Date:	9/30/2020				
Affiliation:	AECOM				
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202				
Phone Number:	513-207-3011				
e-mail address:	josiah.kleinhenz@aecom.com				
Name of Wetland:	Wetland 03				
Vegetation Communit(ies):	PFO				
HGM Class(es):	Depression				

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate:	39.38446, -82.4497
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	050901010202 - West Branch Raccoon Creek
Site Visit:	9/30/2020
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	See Figure 2
Soil Survey:	See Figure 2

Name of Wetland:	Wetland 03				
Wetland Size (delineated acres):	በ የ	Wetland Size (Estimated total acres):	0.42		

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Data point W-WRL-20200930-01 is point in to wetland W-WRL-20200930-01, somewhat open PFO wetland in small valley bottom; obviously affected by acid mine ruonff and sedimentation, drains to east to stream S-WRL-20200930-04 with pH measured at 2.8. Historical USGS topographic maps indicate strip mine lands around and upstream of wetland. Soils problematic due to prior upslope strip mine activities, acid mine drainage limiting microbial soil activities, iron deposition from acidified groundwater at surface/upper layer presenting reddish colors. Wetland boundary fully delineated.

Wetland ID:	Wetland 03

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	x	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.		
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		X
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		X

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	*NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	*NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	*NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated	YES	*NO
	during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

		I	
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the	YES	*NO
	cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status. Go to Question 9a	Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less	YES	*NO
	than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake	Go to Question 9b	Go to Question 10
	Erie that is accessible to fish?	Go to Question of	SO to Question to
- Oh	Does the wetland's hydrology result from measures designed to prevent erosion and the	\	210
90		YES	NO
	loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 9c
90	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation	YES	NO
	communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland Go to Question 10	Go to Question 9e
Ļ			
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant	YES	NO
	species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton,	YES	*NO
-	Henry, or Wood Counties and can the wetland be characterized by the following		Go to Question 11
	description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or	YES	*NO
	all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Wetland ID:	Wetland 03								
Site: AEP Ilesbo	ro 138 kV Project	Rater(s):	Stacey K Mueller		Date:	9/30/2020			
2.0 2.0 max 6 pts subtotal	Select one size class a	nd assign score	-	Field ID: W-WRL-20200930-01					
	>50 acres (>20.2ha) (6) 25 to <50 acres (10.1 to 10 to <25 acres (4 to <1	<20.2ha) (5 pts) 0.1ha) (4 pts)		Delineated acres:	0.30				
	3 to <10 acres (1.2 to < x 0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 p	<1.2ha) (2pts) o <0.12ha) (1 pt)		Total acres:	0.42				
max 14 pts. subtotal	2a. Calculate average buffer width. Select only one and assign a WIDE. Buffers average 50m (164ft) or more around wetland perimet MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland verage Yerry NARROW. Buffers average <10m (<32ft) around wetland period buffers average <10m (<32ft)				gn score. Do not double check. meter (7) atland perimeter (4) vetland perimeter (1) perimeter (0) check and average. a area, etc. (7) sst. (5) vation tillage, new fallow field. (3) struction. (1) 3b. Connectivity. Score all that apply. 100 year floodplain (1) X Between stream/lake and other human use (1) Part of vetland/upland (e.g. forest), complex (1) X Part of riparian or upland corridor (1) 3d. Duration inundation/saturation. Score one or dbl check. Semi- to permanently inundated/saturated (4) Regularly inundated (2) Seasonally saturated in upper 30cm (12in) (1)				
14.0 50.0 max 20 pts. subtotal	4a. Substrate disturba None or none apparent Recovered (3) Recovering (2) Recent or no recovery (' 4b. Habitat developme Excellent (7) Very good (6) X Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	nce. Score one of (4) I) nt. Select only of Score one or do (9)	n and Developm or double check and average uble check and average	erage.	shrub/sapling remondation with the sedimentation of	c bed removal			

50.0 subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetla	nd ID:	Wetland 03					
Site:	AEP llesboro	138 kV Project	Rater(s):	Sta	cey K Mueller	Date:	9/30/2020
	-		-		Field ID:		
	50.0				W-WRL-20200930-01		
	subtotal this page						
0	.0 50.0	Metric 5. Special Wetla	ands.				
max 10 pts.	subtotal	Check all that apply and so	core as indicated.				
		Bog (10)					
		Fen (10)					
		Old growth forest (10) Mature forested wetland (5)					
		Lake Erie coastal/tributary wetland-	unrestricted hydrology (10	0)			
		Lake Erie coastal/tributary wetland-					
	_	Lake Plain Sand Prairies (Oak Ope	nings) (10)				
	-	Relict Wet Praires (10) Known occurrence state/federal thr	eatened or endangered s	pecies (1	0)		
		Significant migratory songbird/water	-		-,		
		Category 1 Wetland. See Question	5 Qualitative Rating (-10)	1			
11	.0 61.0	Metric 6. Plant commu	ınities, interspe	rsion,	microtopography.		
max 20pts.	subtotal	6a. Wetland Vegetation Co	-	,	Vegetation Communit	ty Cover Scale	
		Score all present using 0 to 3 scale			<u> </u>	0.2471 acres) contiguous area	
		Aquatic bed		1	Present and either comprises	•	
	0	Emergent Shrub			vegetation and is of moderate significant part but is of low qu		
		Forest		2	Present and either comprises		
		Mudflats			vegetation and is of moderate		
		Open water		_	part and is of high quality		
	<u> </u>	Other 6b. horizontal (plan view) Intersp	oreion	3	Present and comprises signifi vegetation and is of high qual	cant part, or more, of wetland's 3	
		Select only one.	ersion.		vegetation and is of high qual	шу	
		High (5)			Narrative Description of Veg	getation Quality	
		Moderately high(4)			Low spp diversity and/or pred	ominance of nonnative or low	
	х	Moderate (3)			disturbance tolerant native sp		
		Moderately low (2) Low (1)			although nonnative and/or dis	ponent of the vegetation, mod	
		None (0)			can also be present, and spec		
		6c. Coverage of invasive plants.	Refer		moderately high, but generally	w/o presence of rare	
		Table 1 ORAM long form for list. Ac	dd		threatened or endangered spr		
		or deduct points for coverage Extensive >75% cover (-5)			A predominance of native spe and/or disturbance tolerant na		
		Moderate 25-75% cover (-3)			absent, and high spp diversity	•	
		Sparse 5-25% cover (-1)			the presence of rare, threaten	ned, or endangered spp	
		Nearly absent <5% cover (0)					
	<u> x</u>	Absent (1) 6d. Microtopography.		0	Mudflat and Open Water Cla Absent <0.1ha (0.247 acres)	ass Quality	
		Score all present using 0 to 3 scale			Low 0.1 to <1ha (0.247 to 2.4	7 acres)	
	1	Vegetated hummucks/tussucks			Moderate 1 to <4ha (2.47 to 9	,	
		Coarse woody debris >15cm (6in)		3	High 4ha (9.88 acres) or more	9	
		Standing dead >25cm (10in) dbh Amphibian breeding pools			Microtopography Cover Ser	alo.	
	_ 1	Lymphinian preeding books		0	Microtopography Cover Sca Absent	216	
				1	Present very small amounts of	or if more common	
					of marginal quality		
	<u> </u>			2	Present in moderate amounts	, but not of highest	
		ΓAL (Max 100 pts)			quality or in small amounts of	highest quality	
	2 Cat	egory		3	Present in moderate or greate	er amounts	
					and of highest quality		

ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	2	
	Metric 2. Buffers and surrounding land use	1	4	
	Metric 3. Hydrology	2	20	
	Metric 4. Habitat	1	4	
	Metric 5. Special Wetland Communities		0	
	Metric 6. Plant communities, interspersion, microtopography	1	1	
	TOTAL SCORE	6	51	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one			Evaluation of Cate	gorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	l a		Is quantitative rating (excluding gray zon using the narrative	g score less than the Category 2 scoring threshold in the score less than the Category 2 scoring threshold in the score less than the Category of the wetland criteria in OAC Rule 3745-1-54(C) and biological sessments to determine if the wetland has been
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO		1-54(C) and 2) the ordermined to be a be categorized as a	d using the 1) narrative criteria in OAC Rule 3745- quantitative rating score. If the wetland is Category 3 wetland using either of these, it should Category 3 wetland. Detailed biological and/or ents may also be used to determine the wetland's
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland			threshold (including of the wetland using and biological and/o	g score <i>greater</i> than the Category 2 scoring any gray zone)? If yes, reevaluate the category the narrative criteria in OAC Rule 3745-1-54(C) or functional assessments to determine if the nder-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	*NO		particular category, In all instances how	etland is located within the scoring range for a the wetland should be assigned to that category. ever, the narrative criteria described in OAC Rule e used to clarify or change a categorization based ore.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	*YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria			categories or to ass wetland assessmen	n of assigning the wetland to the higher of the two ign a category based on the results of a nonrapid it method, e.g. functional assessment, biological and a consideration of the narrative criteria in OAC
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	Wetland was			A wetland may be undercategorized using this method, but st one or more superior functions, e.g. a wetland's biotic commmay be degraded by human activities, but the wetland may st superior hydrologic functions because of its type, landscape p size, local or regional significance, etc. In this circumstance, narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are contained and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.	
		•	Final Category	,	



Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No. 60624128

Wetland 03

Date:

September 30, 2020

Description:

PFO

Category 3

Facing North



Wetland 03

Date:

September 30, 2020

Description:

PFO

Category 3

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No. 60624128

Wetland 03

Date:

September 30, 2020

Description:

PFO

Category 3

Facing South



Wetland 03

Date:

September 30, 2020

Description:

PFO

Category 3

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No.

60624128

Wetland 03

Date:

September 30, 2020

Description:

PFO

Category 3

Soil Pit



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Ilesboro 138 kV Project / Wetland w-wri-20200930-0	2 City/County: Vinton Sampling Date: 30-Sep-20
Applicant/Owner: AEP	State: OH Sampling Point: -WRL-20200930-02-pe
Investigator(s): WRL, SKM	Section, Township, Range: S 3 T 12N R 17W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, none): concave Slope: 1.0 % / 45.0 °
Subregion (LRR or MLRA): LRR N L	at.: 39.38981 Long.: -82.4535 Datum: NAD83
Soil Map Unit Name: Bhv1B - Bethesda silt loam, 0 to 8 percent :	slopes, reclaimed NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time	
	cantly disturbed? Are "Normal Circumstances" present? Yes No No
	,
Are Vegetation . , Soil . , or Hydrology . natura	illy problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No O	Is the Sampled Area Yes No
Wetland Hydrology Present? Yes No O	within a Wetland?
Remarks:	
Sample point w-wrl-20200930-02-pem is point in to wetland W-	WRL-20200930-02, a PEM wetland located in depression and swale in rolling hills
landscape of reclaimed strip mine land. Wetland drains to north	via UDF to larger wetland down slope that drains to east. Culvert likely provides
downstream connectivity. Wetland boundary extends to SE outs	side of study area. Reclaimed strip mine land = significantly disturbed soils.
Hydrology	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that app	_
Surface Water (A1)	Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulf	
	ospheres along Living Roots (C3) Moss Trim Lines (B16)
	reduced Iron (C4) Dry Season Water Table (C2)
Drift deposits (B3)	rface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain	
☐ Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
✓ Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (inche)	
The Control of the Co	es): Wetland Hydrology Present? Yes No
(includes capillary fringe) Yes V No V Depth (inche	
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspections), if available:
Remarks:	
	t. Primary source of hydrology is concentration of runoff in depression and swale, d and NHD-mapped stream. Culvert likely provides downstream connectivity.
	· · · · · · · · · · · · · · · · · · ·

VEGETATION (Five/Four Strata) - Use scientific names of plants.

			minant		Sampling Point: W-WRL-20200930-02-p
	Absolute	Rel		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30' radius</u>)	% Cover	Cov	ver	Status	Number of Dominant Species
1	0	\sqcup	0.0%		That are OBL, FACW, or FAC: 3 (A)
2	0	\square	0.0%		Total Number of Dominant
3		Ц.	0.0%		Species Across All Strata:4 (B)
4	0	Ц.	0.0%		
5	0		0.0%		Percent of dominant Species That Are ORL FACW or FAC: 75.0% (A/B)
6			0.0%		That Are OBL, FACW, or FAC:(A/B)
7			0.0%		Prevalence Index worksheet:
8	0		0.0%		Total % Cover of: Multiply by:
(Diet size: 151 redius	,	= Tot	tal Cover		0BL speci es 10 x 1 = 10
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius	,		400.00/		FACW species
1. Rubus occidentalis		-	100.0%	UPL	FAC speciles 35 x 3 = 105
2		H-	0.0%		FACU speci es $\frac{3}{}$ x 4 = $\frac{12}{}$
3		Η-	0.0%		UPL species 2 x 5 = 10
4		Η-	0.0%		1 · · ·
5		Η-	0.0%		Total of Tot
6		Н-	0.0%		Prevalence Index = B/A = 2.359
7		Ц-	0.0%		Hydrophytic Vegetation Indicators:
8		Ц-	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	Ц.	0.0%		✓ Dominance Test is > 50%
10	0	Щ	0.0%		Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tot	tal Cover		Morphological Adaptations ¹ (Provide supporting
1	0_		0.0%		data in Remarks or on a separate sheet)
2.			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3.			0.0%		¹ Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.		\Box	0.0%		Four Vegetation Strata:
	0	\Box	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
7		 Tot =	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Herb Stratum (Plot size: <u>5' radius</u>)					Sapling/shrub stratum – Consists of woody plants, excluding
1. Scirpus cyperinus	30	<u></u>	29.7%	FACW	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Juncus effusus		<u></u>	19.8%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants, regardless of size, and all other plants less than 3.28 ft tall.
3. Dichanthelium dichotomum		ዾ-	19.8%	FAC	
4. Euthamia graminifolia	10	Η-	9.9%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Carex Iurida	10	Η-	9.9%	OBL	
6. Solidago rugosa	5	Η-	5.0%	FAC	Five Vegetation Strata:
7. Andropogon virginicus	3	Η-	3.0%	FACU	Tree - Woody plants, excluding woody vines, approximately 20
8. Symphyotrichum lateriflorum	_ 3	Ц-	3.0%	FACW	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9	0	Ц.	0.0%		Sapling stratum – Consists of woody plants, excluding woody
10	0	Ц.	0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0	\square	0.0%		3 in. (7.6 cm) DBH.
12	0	\square	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' radius)	101	= Tot	tal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody
2.	0		0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
3.	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4	0	<u></u>	0.0%		height.
	0	\Box	0.0%		
5	0	<u>_</u> -	0.0%		Hydrophytic
6		_ To	tal Cover		Vegetation Present? Yes No O

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

Hydrophytic vegetation indicators present, dominance test=75%, dominant species are FACW, FAC and FACU. Sphagnum moss sp. was present approximately 10% cover, not used in dominance test calculation as not a vascular plant, not identified to species.

Soil Sampling Point: W-WRL-20200930-02-p

	ription: (De	scribe to	the depth	needed to	documen	t the indic	ator or cor	nfirm the a	absence of indicator	rs.)			
Depth Matrix (inches) Color (moist) %			0-1-		edox Feat	1	1.5-2	Toyture	F	marka			
(inches) 0-5	Color_	(moist)	80	Color_	(moist) 6/2	20	<u>Tvpe_</u> ' RM	Loc ²	Texture Sandy Clay	Rer	marks		
				2.01			TOVI		- Janay Slay	coal fine	S		
5-8	N	3/1	100							mi xed soi	Is		
8-18	2.5Y	5/2	70	2.5Y	5/6	20	C	M	Sandy Clay				
		,		2.5y	4/1	10	D	M		4			
		`			1								
		`					`			1			
										1			
						_	<u>, </u>						
		_											
Type: C=Con	centration. I	D=Depleti	on. RM=Redu	uced Matrix.	CS=Cover	ed or Coate	ed Sand Gra	ns ² Loca	tion: PL=Pore Lining.	M=Matrix			
Hydric Soil I		'								Problematic Hydr	ic Soils 3.		
Histosol ((A1)			☐ Dar	k Surface	(S7)				3	IC SOIIS .		
Histic Epi	pedon (A2)			Poly	value Belo	w Surface	(S8) (MLRA	147,148)		(A10) (MLRA 147)			
Black Hist							MLRA 147, 1		Coast Prairi (MLRA 147,	e Redox (A16) 148)			
	n Sulfide (A4)		Loa	my Gleyed	l Matrix (F2)		`	loodplain Soils (F19)		
	Layers (A5)				oleted Matr				(MLRA 136		,		
2 cm Muc	k (A10) (LR	R N)				urface (F6)			☐ Very Shallow Dark Surface (TF12)				
	Below Dark	•	A11)			Surface (F	7)		✓ Other (Explain in Remarks)				
_	k Surface (A				lox Depres		(=)						
Sandy Mu MLRA 14	uck Mineral (S1) (LRR	N,	∟ Iror MLF	n-Mangane RA 136)	se Masses	(F12) (LRR I	٧,					
_	eyed Matrix	(84)			,	e (F13) (M	LRA 136, 12	2)					
Sandy Re		(34)					s (F19) (MLF		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
_	Matrix (S6)					•) (MLRA 127	•					
							, ,	,					
Restrictive L	ayer (if ob:	served):											
Type:	h \								Hydric Soil Prese	ent? Yes •	No O		
Depth (inc	nes):								,				
elow 8" sho	ws evidend	te of hyd	ric soil india	cator devel	lopment.	ZI IIIIS II	11101100010	yel o o k	surruec, depic	zed many (iew v	chroma, high value)		

Upland 05

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Ilesboro 138 kV Project / Wetland w-wrl-20200930-	02 City/County: Vinton Sampling Date: 30-Sep-20
Applicant/Owner: AEP	State: OH Sampling Point: JPL-WRL-20200930-02
Investigator(s): WRL, SKM	Section, Township, Range: S 3 T 12N R 17W
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, convex, none): convex Slope: 1.0 % / 45.0 °
Subregion (LRR or MLRA): LRR N	Lat.: 39.38977 Long.: -82.45344 Datum: NAD83
Soil Map Unit Name: Bhv1B - Bethesda silt loam, 0 to 8 percent	slopes, reclaimed NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time	e of year? Yes No O (If no, explain in Remarks.)
	icantly disturbed? Are "Normal Circumstances" present? Yes 💿 No 🔾
Are Vegetation 🔲 , Soil 🗌 , or Hydrology 🔲 natur	ally problematic? (If needed, explain any answers in Remarks.)
Summary of Findings - Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area Yes No No
Wetland Hydrology Present? Yes No •	within a Wetland?
	rrl-202000930-02, PEM wetland. Point out is approximately 10' east of boundary on as no wetland criteria were met. Reclaimed strip mine land = significantly disturbed
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that ap	ply) Surface Soil Cracks (B6)
	Plants (B14) Sparsely Vegetated Concave Surface (B8)
	ulfide Odor (C1)
	Reduced Iron (C4) Dry Season Water Table (C2)
	Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift deposits (B3) Thin Muck St	
	in in Remarks) Stunted or Stressed Plants (D1) Comparable Position (D2)
☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7)	Geomorphic Position (D2) Shallow Aquitard (D3)
Water-Stained Leaves (B9)	☐ Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (inch	nes): 0
	─────────────────────────────────────
Saturation Present? Yes No Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial)	
Describe Recorded Data (stream gauge, monitoring wen, acria)	Dilutus, previous inspections), ii available.
Remarks:	
No hydrology indicators present.	

Upland 05

VEGETATION (Five/Four Strata) - Use scientific names of plants.

			ominant		Sampling Point: UPL-WRL-20200930-02
	Absolute % Cover	Re	el.Strat. over	Indicator Status	Dominance Test worksheet: Number of Dominant Species
1	0		0.0%		That are OBL, FACW, or FAC: 1 (A)
2	0		0.0%		Total Number of Dominant
3			0.0%		Species Across All Strata:4 (B)
4			0.0%		
5	0		0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)
6	0	\square	0.0%		That Are Obt., FACW, OF FAC.
7			0.0%		Prevalence Index worksheet:
8		Ш	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius		= Tc	otal Cover		0BL speci es x 1 =
A Dhua tambian	2	✓	100.0%	UPL	FACW speci es 10 x 2 = 20
1. Rnus typnina 2.			0.0%		FAC speci es <u>30</u> x 3 = <u>90</u>
3			0.0%		FACU speci es 60 x 4 = 240
4			0.0%		UPL speci es $3 \times 5 = 15$
5.			0.0%		Column Totals: 103 (A) 365 (B)
6.			0.0%		Prevalence Index = B/A = 3.544
7			0.0%		
8.			0.0%		Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
9.			0.0%		
10			0.0%		Dominance Test is > 50% Prevalence Index is ≤3.0 ¹
Shrub Stratum (Plot size:)		= Tc	tal Cover		
	0		0.0%		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1 2	0	\Box	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3.	0	\Box	0.0%		¹ Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.		\Box	0.0%		Definition of Vegetation Strata:
6.	0	\Box	0.0%		Four Vegetation Strata:
7	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.
Herb Stratum (Plot size: 5' radius)	0 :	= Tc	tal Cover		(7.6 cm) or more in diameter at breast height (DBH), regardless of height.
1. Andropogon virginicus	25	✓	25.0%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
2. Schizachyrium scoparium	20	✓	20.0%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Solidago rugosa	20	✓	20.0%	FAC	regardless of size, and all other plants less than 3.28 ft tall.
4. Potentilla indica	15		15.0%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft in height.
5. Euthamia graminifolia	10		10.0%	FAC	im neight.
6. Symphyotrichum lateriflorum	10		10.0%	FACW	Five Vegetation Strata:
7	0		0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0		0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH). Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
12	0	Ш	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Woody Vine Stratum (Plot size: 30' radius)	100	= Tc	otal Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0		0.0%		including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m)
2	0		0.0%		in height.
3	0		0.0%		Woody vines – Consists of all woody vines, regardless of
4.	0		0.0%		height.
5.	0		0.0%		Hydrophytic
6.	0		0.0%		Vegetation No. 0
	0	= To	otal Cove		Present? Yes V No •
Remarks: (Include photo numbers here or on a separate shee	et.)				
No hydrophytic vegetation indicators present; dominant species are F	AC, FACU ar	nd U	PL, prevale	ence index :	> 3.0

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

US Army Corps of Engineers

Upland 05 Soil

Soil Sampling Point: UPL-WRL-20200930-02

Profile Descr	iption: (De	escribe to	the depth	needed to	documen:	t the indic	ator or co	nfirm the	absence of indicator	-s.)	
Depth		Matrix	-			edox Featu	ures1				
(inches)		(moist)			(moist)	%	Tvpe'	Loc2	Texture	Remarks faint redox concentrations	
0-6	2.5Y	5/2	90	2.5Y	5/4	10	С	PL_	Sandy Clay	, arme reason conserver a trons	
6-13	2.5Y	5/3	60	2.5Y	6/2	40	RM	M	Sandy Clay		
13-15	2.5Y	3/1	95	2.5Y	5/3	5	C	M	Coarse Sand	coal fines present	
* '			on. RM=Redu	uced Matrix,	CS=Cover	ed or Coate	ed Sand Gra	ins ² Loca	tion: PL=Pore Lining.		
Hydric Soil I					1.6.6	(07)			Indicators for F	Problematic Hydric Soils ³ :	
Histosol (A	oedon (A2)			_	k Surface (` ′	(S8) (MLRA	147 148)	2 cm Muck	(A10) (MLRA 147)	
Black Hist				_			/LRA 147, 1			e Redox (A16)	
Hydrogen	Sulfide (A4 Layers (A5)			Loa		Matrix (F2)		,	(MLRA 147, Piedmont F (MLRA 136,	loodplain Soils (F19)	
	k (A10) (LR			_ '		urface (F6)				w Dark Surface (TF12)	
	Below Dark		A11)	☐ Dep	leted Dark	Surface (F	7)		Other (Explain in Remarks)		
☐ Thick Darl	☐ Thick Dark Surface (A12)			Red	lox Depres	sions (F8)			Other (Explain in Remarks)		
Sandy Mu MLRA 147	ck Mineral (7, 148)	(S1) (LRR	N,	☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)							
Sandy Gle	eyed Matrix	(S4)		Um	bric Surfac	e (F13) (MI	LRA 136, 12	22)	3		
Sandy Red				Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147)					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Stripped N	Matrix (S6)							7, 147)			
Restrictive La	ayer (if ob	served):									
Depth (inch	hes):								Hydric Soil Prese	ent? Yes O No 🖲	
Remarks:											
										ay have some relict hydric	

Background Information				
Name:	Stacey K Mueller			
Date:	9/30/2020			
Affiliation:	AECOM			
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202			
Phone Number:	513-419-3450			
e-mail address:	stacey.mueler@aecom.com			
Name of Wetland:	Wetland 04			
Vegetation Communit(ies):	PEM			
HGM Class(es):	Depression			
	address north arrow landmarks distances roads ats			

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



	-
Lat/Long or UTM Coordinate:	39.38981 -82.4535
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	050901010202 - West Branch Raccoon Creek
Site Visit:	9/30/2020
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3
Name of Wetland:	Wetland 04

Name of Wetland:	Wetland 04					
Wetland Size (delineated acres):	0.31	Wetland Size (Estimated total acres):	0.58			

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Sample point w-wrl-20200930-02-pem is point in to wetland W-WRL-20200930-02, a PEM wetland located in depression and swale in rolling hills landscape of reclaimed strip mine land. Wetland drains to north via UDF to larger wetland down slope that drains to east. Culvert likely provides downstream connectivity. Wetland boundary extends to SE outside of study area. Reclaimed strip mine land = significantly disturbed soils.

One primary and multiple secondary hydrology in flowing to north off-site to steep hillside down to a larger wetland and NHD-mapped stream.

Final score:	45	Category:	2

Wetland ID:	Wetland 04
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Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		X
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		X

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2.	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
•	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

Wetland ID: Wetland 04

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the	YES	*NO
	cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status. Go to Question 9a	Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	*NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	*NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	*NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	*NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant	YES	*NO
	species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton,	YES	*NO
10	Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or	YES	*NO
	all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating
	western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).		

Wetland ID: Wetland 04

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Vetla	nd ID:	Wetland 04					
ite:	AEP llesboro 1	38 kV Project	Rater(s):	Stacey K Mueller		Date:	9/30/2020
	.0 2.0	Metric 1. Wetla	•	•	Field ID: W-WRL-20200930-0	2	
ix 6 pts	subtotal	Select one size class a >50 acres (>20.2ha) (6 p 25 to <50 acres (10.1 to	ots)		Delineated acres:	0.31	
	X		ha) (3 pts) <1.2ha) (2pts)		Total acres:	0.58	
		0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 p					
13 ax 14 pts.	.0 15.0	•		and surrounding	land use.	al.	
	x x x	WIDE. Buffers average & MEDIUM. Buffers average & MEDIUM. Buffers average & WERY NARROW. Buffer 2b. Intensity of surrour VERY LOW. 2nd growth LOW. Old field (>10 year MODERATELY HIGH. F	50m (164ft) or m ge 25m to <50m age 10m to <25n s average <10m nding land use. or older forest, rs), shrubland, y tesidential, fence	ore around wetland perinr (82 to <164ft) around we no (32ft to <82ft) around we (<32ft) around we than to complete or the comp	eter (7) land perimeter (4) teltand perimeter (1) erimeter (0) eck and average. area, etc. (7) st. (5) ation tillage, new fallow field.		
11	.0 26.0	Metric 3. Hydro	logy.				
30 pts.	x x	Seasonal/Intermittent su Perennial surface water 3c. Maximum water de >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6 <0.4m (<15.7in) (1)	rface water (3) (lake or stream) pth. Select one. iin) (2) tural hydrologic 12)	(5)	3b. Connectivity. Score. 100 year floodplain (1) Between stream/lake and Part of wetland/upland (e. Part of riparian or upland 3d. Duration inundation/ Semi- to permanently inur Regularly inundated/satur Seasonally saturated in uplouble check and average. Check all disturbances of ditch tile dike weir stormwater input	other human use (1) g. forest), complex (1) corridor (1) (saturation. Score one on dated/saturated (4) ated (3)	istormwater) k
13	.0 39.0	Metric 4. Habita	t Alteratio	n and Developm	ent.		
x 20 pts.	subtotal X	None or none apparent Recovered (3) Recovering (2) Recent or no recovery (* 4b. Habitat developme Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. S None or none apparent	(4) I) Select only (uble check and average		served Shrub/sapling ren herbaceous/aqua sedimentation dredging farming nutrient enrichme	ttic bed removal
	20.0						
	39.0 subtotal this page	ORAM v. 5.0 Field Form	Quantitative Ra	tina			

Wetla	nd ID:	Wetland 04					
Site:	AEP Ilesb	oro 138 kV Project	Rater(s):	Sta	cey K Mueller	Date:	9/30/2020
					Field ID:		
	39.0				W-WRL-20200930-02		
	subtotal this page						
0	.0 39.0	Metric 5. Special We	etlands.				
max 10 pts.	subtotal	Check all that apply and	d score as indicated.				
		Bog (10)					
	ŀ	Fen (10) Old growth forest (10)					
		Mature forested wetland (5)					
		Lake Erie coastal/tributary wetla		10)			
	ļ	Lake Erie coastal/tributary wetla					
	ŀ	Lake Plain Sand Prairies (Oak (Relict Wet Praires (10)	Openings) (10)				
	ŀ	Known occurrence state/federal	threatened or endangered	species	(10)		
		Significant migratory songbird/w	ater fowl habitat or usage (10)	· · ·		
	Į	Category 1 Wetland. See Quest	tion 5 Qualitative Rating (-10	0)			
	0 45.0	Matria C. Dlant com					
	.0 45.0	Metric 6. Plant com		15101			
max 20pts.	subtotal	6a. Wetland Vegetation Score all present using 0 to 3 so		0	Vegetation Communi	(0.2471 acres) contiguous area	
	ſ	Aquatic bed	Jaie.	1	Present and either comprises		
		2 Emergent			vegetation and is of moderate		
		0 Shrub			significant part but is of low q		
		Forest Mudflats		2	Present and either comprises	s significant part of wetland's 2 e quality or comprises a small	
	ŀ	Open water			part and is of high quality	e quality of comprises a small	
		Other		3		icant part, or more, of wetland's 3	
		6b. horizontal (plan view) Inte	rspersion.		vegetation and is of high qua	lity	
	1	Select only one. High (5)			Narrative Description of Ve	getation Quality	
	ŀ	Moderately high(4)				Iominance of nonnative or low	
		Moderate (3)			disturbance tolerant native sp	ecies	
		Moderately low (2)				ponent of the vegetation, mod	
	ŀ	x Low (1) None (0)			although nonnative and/or dis can also be present, and spe		
	L	6c. Coverage of invasive plan	ts. Refer		moderately high, but generall		
		Table 1 ORAM long form for list	. Add		threatened or endangered sp		
	Г	or deduct points for coverage				ecies, with nonnative spp high	
	ŀ	Extensive >75% cover (-5) Moderate 25-75% cover (-3)			and/or disturbance tolerant na absent, and high spp diversity		
		Sparse 5-25% cover (-1)			the presence of rare, threater		
		Nearly absent <5% cover (0)					
	l	X Absent (1) 6d. Microtopography.		0	Mudflat and Open Water Cl Absent <0.1ha (0.247 acres)	ass Quality	
		Score all present using 0 to 3 so	cale.	1	Low 0.1 to <1ha (0.247 acres)	7 acres)	
	ſ	Vegetated hummucks/tussucks		2	Moderate 1 to <4ha (2.47 to 9		
		0 Coarse woody debris >15cm (6		3	High 4ha (9.88 acres) or more	e	
		Standing dead >25cm (10in) db Amphibian breeding pools	h		Microtopography Cover Sc	alo	
	L	0		0	Absent	aie	
		-		1	Present very small amounts of	or if more common	
					of marginal quality		
1	.= -1	TOTAL (11. 400 4.)		2	Present in moderate amounts	s, but not of highest	
		TOTAL (Max 100 pts)			quality or in small amounts of	_ · · · · · ·	
	2	Category		3	Present in moderate or greate	er amounts	

and of highest quality

Wetland ID: Wetland 04

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	*NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	,	2	
	Metric 2. Buffers and surrounding land use	1	.3	
	Metric 3. Hydrology		.1	
	Metric 4. Habitat		.3	
	Metric 5. Special Wetland Communities		0	
	Metric 6. Plant communities, interspersion, microtopography		6	
	TOTAL SCORE	4	5	Category based on score breakpoints

 $Complete\ Wetland\ Categorization\ Worksheet.$

Wetland ID:	Wetland 04
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	*YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria		Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined the ORAM.	Imay be degraded by human activities, but the wetland may still exhibit
		Final Cate	ory



PHOTOGRAPHIC RECORD WETLANDS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No. 60624128

Wetland 04

Date:

September 30, 2020

Description:

PEM

Category 2

Facing North



Wetland 04

Date:

September 30, 2020

Description:

PEM

Category 2

Facing East





PHOTOGRAPHIC RECORD WETLANDS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No. 60624128

Wetland 04

Date:

September 30, 2020

Description:

PEM

Category 2

Facing South



Wetland 04

Date:

September 30, 2020

Description:

PEM

Category 2

Facing West





PHOTOGRAPHIC RECORD WETLANDS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Illesboro South Central Power 138kV Transmission Line Rebuild Project

Project No.

60624128

Wetland 04

Date:

September 30, 2020

Description:

PEM

Category 2

Soil Pit



Upland 03

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: AEP Ilesboro 138 kV Project	City/County: Vinton	Sampling Date: 01-Oct-20
Applicant/Owner: AEP	State: OH	Sampling Point: JPL-WRL-20201001-01
Investigator(s): WRL, SKM	Section, Township, Range: S	3 T 12N R 17W
Landform (hillslope, terrace, etc.): Swale	Local relief (concave, convex, no	one): concave Slope: 5.0 % / 78.7 °
Subregion (LRR or MLRA): LRR N	 Lat.: 39.37961 Long	NADOS
Soil Map Unit Name: WhL1D1 - Wharton-Latham silt loams,	15 to 25 percent slopes	NWI classification: None
Are climatic/hydrologic conditions on the site typical for this t	ime of year? Yes No O (If no, e	explain in Remarks.)
Are Vegetation 🔲 , Soil 🔲 , or Hydrology 🔲 si	gnificantly disturbed? Are "Normal C	Circumstances" present? Yes ● No ○
Are Vegetation , Soil , or Hydrology na	aturally problematic? (If needed, ex	xplain any answers in Remarks.)
Summary of Findings - Attach site map sho	wing sampling point locations	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes No •	Is the Sampled Area within a Wetland?	Yes ○ No •
Wetland Hydrology Present? Yes No No	WILLIII d Wellanu:	
Sample point upl-wrl-20201001-01 is in a swale area with vidoes not meet all 3 criteria. Drains to south to a UDF that e		
Wetland Hydrology Indicators:		Cd (Indicators (minimum of two required)
Primary Indicators (minimum of one required; check all that		Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
	uatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
	n Sulfide Odor (C1)	✓ Drainage Patterns (B10)
	Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)
	e of Reduced Iron (C4)	Dry Season Water Table (C2)
	ron Reduction in Tilled Soils (C6) ck Surface (C7)	☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9)
	xplain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	'	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)	l	FAC-neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth	(inches): 0	
V ○ V ◎	(inches):	
Saturation Present?	(inches): Wetland Hydro	ology Present? Yes 🌘 No 🔾
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aer		ble:
3, 3, 3		
Remarks:		
No primary and 2 secondary hydrology indicators present du to improve drainage to roadway culvert, no feature downstri		
to improve drainage to roadway curvert, no reature downsar-	adili. Friillidi y Source of Hydrology is Surra	se fullon and concentration.

Upland 03VEGETATION (Five/Four Strata) - Use scientific names of plants.

			ominant		Sampling Point: <u>UPL-WRL-20201001-01</u>
	Absolute % Cover	Re	ecies? • el.Strat. over	Indicator Status	Dominance Test worksheet:
1. Ulmus rubra	2		100.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)
2.	0		0.0%		
3.			0.0%		Total Number of Dominant Species Across All Strata: 10 (B)
4			0.0%		(-)
5			0.0%		Percent of dominant Species That Are OBL_FACW_or_FAC: 50.0% (A/B)
6			0.0%		That Are OBL, FACW, or FAC: 50.0% (A/B)
7			0.0%		Prevalence Index worksheet:
8	0	\square	0.0%		Total % Cover of: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: 15' radius		= Tc	tal Cover	-	0BL speci es
4 Doleve endelegable	15	✓	34.9%	UPL	FACW speci es x 2 =40
O. Flance and Julian	10	✓	23.3%	UPL	FAC speci es <u>62</u> x 3 = <u>186</u>
• 61	10	<u>✓</u>	23.3%	FAC	FACU speci es $28 \times 4 = 112$
Sambucus nigra Rosa multiflora	Е		11.6%	FACU	UPL species $\frac{40}{}$ x 5 = $\frac{200}{}$
5. Carya ovata			7.0%	FACU	Column Totals: <u>150</u> (A) <u>538</u> (B)
6.			0.0%		Prevalence Index = B/A = 3.587
7			0.0%		
8.			0.0%		Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
9.			0.0%		Dominance Test is > 50%
10	0		0.0%		Prevalence Index is <3.0 ¹
Shrub Stratum (Plot size:)	43	= Tc	tal Cover		Morphological Adaptations ¹ (Provide supporting
1	0		0.0%		data in Remarks or on a separate sheet)
2.			0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3.	0		0.0%		¹ Indicators of hydric soil and wetland hydrology must
4.			0.0%		be present, unless disturbed or problematic.
5.			0.0%		Definition of Vegetation Strata:
6.			0.0%		Four Vegetation Strata:
7.	0		0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless
Herb Stratum (Plot size: 5' radius)	0	= Tc	tal Cover	-	of height.
1. Dichanthelium clandestinum	20	✓	25.0%	FAC	Sapling/shrub stratum – Consists of woody plants, excluding
Rubus occidentalis	15		18.8%	UPL	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb stratum – Consists of all herbaceous (non-woody) plants,
Impatiens capensis	10		12.5%	FACW	regardless of size, and all other plants less than 3.28 ft tall.
4. Solidago altissima	10		12.5%		Woody vines – Consists of all woody vines greater than 3.28 ft
5. Eutrochium maculatum	10	V	12.5%	FACW	in height.
6. Verbesina alternifolia	5		6.3%	FAC	Five Vegetation Strata:
7. Oxalis stricta	5		6.3%	FACU	Tree - Woody plants, excluding woody vines, approximately 20
8. Calystegia sepium	5		6.3%	FAC	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0		0.0%		diameter at breast height (DBH). Sapling stratum – Consists of woody plants, excluding woody
10	0		0.0%		vines, approximately 20 ft (6 m) or more in height and less than
11	0		0.0%		3 in. (7.6 cm) DBH.
	0	\square	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
12		= Tc	otal Cover	-	Herb stratum – Consists of all herbaceous (non-woody) plants,
12	80				including herbaceous vines, regardless of size, and woody
		v	80.0%	FAC	, , , , , , , , , , , , , , , , , , , ,
Woody Vine Stratum (Plot size: 30' radius)			80.0%	FACU FACU	species, except woody vines, less than approximately 3 ft (1 m) in height.
Woody Vine Stratum (Plot size: 30' radius) 1. Toxicodendron radicans	20				species, except woody vines, less than approximately 3 ft (1 m) in height. Woody vines – Consists of all woody vines, regardless of
Woody Vine Stratum (Plot size: 30' radius) 1. Toxicodendron radicans 2. Vitis aestivalis	20 5 0		20.0%		species, except woody vines, less than approximately 3 ft (1 m) in height.
Woody Vine Stratum (Plot size: 30' radius) 1. Toxicodendron radicans 2. Vitis aestivalis 3.	20 5 0		20.0%		species, except woody vines, less than approximately 3 ft (1 m) in height. Woody vines – Consists of all woody vines, regardless of height.
Woody Vine Stratum (Plot size: 30' radius) 1. Toxicodendron radicans 2. Vitis aestivalis 3. 4.	20 5 0		20.0% 0.0% 0.0%		species, except woody vines, less than approximately 3 ft (1 m) in height. Woody vines – Consists of all woody vines, regardless of height. Hydrophytic Vegetation
Woody Vine Stratum (Plot size: 30' radius) 1. Toxicodendron radicans 2. Vitis aestivalis 3. 4. 5.	20 5 0 0		20.0% 0.0% 0.0% 0.0%	FACU	species, except woody vines, less than approximately 3 ft (1 m) in height. Woody vines – Consists of all woody vines, regardless of height. Hydrophytic
Woody Vine Stratum (Plot size: 30' radius) 1. Toxicodendron radicans 2. Vitis aestivalis 3. 4. 5.	20 5 0 0 0 0 25		20.0% 0.0% 0.0% 0.0%	FACU	species, except woody vines, less than approximately 3 ft (1 m) in height. Woody vines – Consists of all woody vines, regardless of height. Hydrophytic Vegetation

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: UPL-WRL-20201001-01

Profile Descr	iption: (D	escribe to	the depth	needed to	documen	t the indic	cator or cor	nfirm the a	absence of indicators.)		
Depth		Matrix			Re	edox Feat	ures				
(inches)		(moist)	%	Color	(moist)	%	Tvpe	Loc ² _	Texture	Remarks	
0-18	2.5Y	4/3	100	. ——					Sandy Loam		
18-26	2.5Y	4/3	80	2.5Y	4/1	20	RM	M	Sandy Loam		
		`			1					`	_
		· -					·			*	
										•	
				. —						<u>, </u>	
											
											
											
¹ Type: C=Cond	centration.	D=Depletio	n. RM=Rec	luced Matrix,	CS=Cover	ed or Coat	ed Sand Gra	ns ² Locat	tion: PL=Pore Lining. M=	-Matrix	
Hydric Soil I	ndicators								Indicators for Pro	blematic Hydric Soils ³ :	
Histosol (A	41)			☐ Dar	k Surface	(S7)			2 cm Muck (A1		
	pedon (A2)						(S8) (MLRA		Coast Prairie R		
Black Hist				Thir	Dark Surf	face (S9) (I	MLRA 147, 1	48)	(MLRA 147,148		
	Sulfide (A4					Matrix (F2	2)			dplain Soils (F19)	
	Layers (A5)				leted Matr				(MLRA 136, 14	17)	
	k (A10) (LR					urface (F6)			☐ Very Shallow □	Oark Surface (TF12)	
	Below Dark	•	.11)			Surface (F	7)		Other (Explain	in Remarks)	
	k Surface (ox Depres		(E40) (LDD)				
Sandy Mu MLRA 147	ck Mineral	(S1) (LRR I	١,	∟ Iron MLF	n-Mangane RA 136)	se Masses	(F12) (LRR I	٧,			
	yed Matrix	(\$4)			,	e (F13) (M	ILRA 136, 12	2)			
Sandy Red		(54)					s (F19) (MLF		³ Indicators	of hydrophytic vegetation and	
	Matrix (S6)) (MLRA 127			hydrology must be present, disturbed or problematic.	
							, (=			·	
Restrictive La	ayer (if ob	served):									
Туре:									Hydric Soil Present	? Yes○ No •	
Depth (incl	nes):								Trydric 3011 Te3cht	Tes O NO O	
Remarks:											
No hydric soil	indicator	s present.									



APPENDIX C

PROJECT STREAM TABLE

ILESBORO PROJECT STREAM TABLE

	Loc	ation			Dell'accete d	Field Evaluation		Field Evaluation Proposed		F	d Impacts			
Stream ID	Latitude	Longitude	Stream Type	Stream Name	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Method	Score	Category / Rating / OAC Designation	Ohio EPA 401 Eligibility	Stream Crossing?	Fill Type	Length (LF)
Stream 01	39.383221	-82.450422	Ephemeral	UNT to West Branch Raccoon Creek	82	3.5	1.6	HHEI	27	Modified Class I	Eligible	TBD	TBD	N/A
Stream 02	39.383661	-82.450270	Perennial	UNT to West Branch Raccoon Creek	208	7.1	6	HHEI	71	Class III	Eligible	TBD	TBD	N/A
Stream 03	39.384453	-82.450244	Perennial	UNT to West Branch Raccoon Creek	251	14.3	7.2	HHEI	73	Class III	Eligible	TBD	TBD	N/A
Stream 04	39.387000	-82.449836	Perennial	UNT to West Branch Raccoon Creek	114	16	14.7	HHEI	77	Class III	Eligible	TBD	TBD	N/A
				Total:	655									0



APPENDIX D

OEPA STREAM DATA FORMS

DELINEATED FEATURES PHOTOGRAPHS (STREAMS)

Version 4.0 October 2018

AFR Heat are 420 Id / Deciret / C W/DL 200	200022 04	
SITE NAME/LOCATION AEP Ilesboro 138 kV Project / S-WRL-202 SITE NUMBER S-001 RIVER BASIN S.E. Ohio Tributar	- Audio National Bullions de Marco de M	_
LENGTH OF STREAM REACH (ft) 82 LAT 39.38217		
- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	ENTS ephemeral, channel dissipates prior to downstream confluence	
OTE: Complete All Items On This Form - Refer to "Fi	ield Evaluation Manual for Ohio's PHWH Streams" for Instru-	ctions
TREAM CHANNEL MODIFICATIONS: NONE NATUR	RAL CHANNEL RECOVERED RECOVERING RECENT OR NO RE	ECOVER
	sent), Check ONLY two predominant substrate TYPE boxes.	HEI
	types tourid (max of b). I mai medic score is sum of boxes A & b	letric
BLDR SLABS [16 pts] 0%	SILT [3 pt] 40% Pc	oints
BOULDER (>256 mm) [16 pts] 0% 0%	LEAF PACKWOODY DEBRIS [3 pts] 20% FINE DETRITUS [3 pts] 0% Su	bstrat
COBBLE (65-256 mm) [12 pts] 0%	CLAY or HARDPAN [0 pt] 0%	ax = 40
GRAVEL (2-64 mm) [9 pts] 0%	MUCK [0 pts] 0%	42
SAND (<2 mm) [6 pts] 40%		12
Total of Percentages of 0.00% Bidr Slabs, Boulder, Cobble, Bedrock	Substrate Percentage Check 100% (B)	A + B
CORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES	0	10.7
2. Maximum Pool Depth (Measure the maximum poo	ol depth within the 61 meter (200 feet) evaluation reach at the	ol Dep
time of evaluation. Avoid plunge pools from road culve	erts or storm water pipes) (Check O/VLY one box):	ax = 30
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts]	5 cm - 10 cm [15 pts] <5 cm [5pts]	^
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [Opts]	0
COMMENTS OHW = 1.6'w x 0.6'd	MAXIMUM POOL DEPTH (centimeters): 0.00	- 1
 BANK FULL WIDTH (Measured as the average of 3 	3-4 measurements) (Check ONLY one box): Bo	ankful
> 4.0 meters (>13') [30 pts]		Width
> 3.0 m - 4.0 m (> 9.7°-13') [25 pts] > 1.5 m - 3.0 m (> 4' 8° - 9' 7°) [20 pts]	T Zum Ga alfabral	
	1 10 1	15
COMMENTS BF = 3.5'w x 1.1'd	AVERAGE BANKFULL WIDTH (meters)	
	ormation <u>must</u> also be completed	
	TY * NOTE: River Left (L) and Right (R) as looking downstream* DODPLAIN QUALITY (Most Predominant per Bank)	
LR (Per Bank) LR	L R	
	ature Forest, Wetland Conservation Tillage	
	mature Forest, Shrub or Old Field Urban or Industrial	
	esidential, Park, New Field Dpen Pasture, Row Crop enced Pasture Mining or Construction	
COMMENTS wooded hillside	mining of construction	
AND AND AND AND ADDRESS AND AD	eck ONLYone box);	
Stream Flowing	Moist Channel, isolated pools, no flow (intermittent)	
Subsurface flow with isolated pools (interstitial)	Dry channel, no water (ephemeral)	
ACTURETED In recent become		
COMMENTS no recent heavy rains	#NaFahagash /Chack ONLY and heavy	
SINUOSITY (Number of bends per 61 m (2001		
SINUOSITY (Number of bends per 61 m (2001	ft) of channel) (Check ONLY one box): 2,0 2,5 3.0 >3	

CWH Name:		DESIGNATED USE(S)	
Distance from Evaluated Stream			
USGS Quadrangle Name: New Plymouth NRCS Soil Map Page; NRCS Soil Map Stream Order: Township/City. Swan MISCELLANEOUS Base Flow Conditions? (*/N) Date of last precipitation: 9/28/20 Quantity. 0.49 Photo-documentation Notes: 3567-upstream, 3568-downstream, 3569-substrates Elevated Turbidity?(*/N): N			
Miscellaneous Photo-documentation Notes: 3567-upstream, 3568-downstream, 3569-substrates	MAPPING: ATTAC	CH COPIES OF MAPS, INCLUDING THE ENTIRE WATER SHED AREA. CLEARLY MARK THE SITE LOCATION,	
Base Flow Conditions? (**YAN) Date of last precipitation: 9/28/20 Quantity: 0.49 Photo-documentation Notes: 3567-upstream, 3568-downstream, 3569-substrates Elevated Turbidity?(**YAN): Canopy (% open): 0 Were samples collected for waterchemistry? (**YAN): Lab Sample # or ID (attach results): Field Measures: Temp (**C) Dissolved Oxygen (mg/l) If not, explain: Additional comments/description of pollution impacts: Stream channel ends at old road bed, evidence of flow continuous of the stream (**YAN) Were sampling reach representative of the stream (**YAN) If not, explain: Additional comments/description of pollution impacts: Stream channel ends at old road bed, evidence of flow continuous of the stream shallow of the stream (**YAN) Species observed (**IN) Species observed (**IN) Species observed (**IRNOWN): Species observed (**IRNOWN): Species observed (**IRNOWN): Species observed (**IRNOWN): Advantic Macroinvertebrates Observed? (**YAN) Species observed (**IRNOWN): Comments Regarding Biology: none present DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (**IThis must be completed Include im; DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (**IThis must be completed Include im; DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (**IThis must be completed Include im; DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (**IThis must be completed Include im; DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (**IThis must be completed Include im; DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (**IThis must be completed Include im; DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (**IThis must be completed Include im; DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (**IThis must be completed Include im; DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (**IThis must be completed Include im; DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (**IThis must be completed Include im; DRAWING AND NARRATIVE DESCRIPTION OF STREAM R	USGS Quadrangle Name:	New Plymouth NRCS Soil Map Page: NRCS Soil Map Stream Order:	
Base Flow Conditions? (Y/N) Date of last precipitation: 9/28/20 Quantity: 0.49 Photo-documentation Notes: 3567-upstream, 3568-downstream, 3569-substrates Elevated Turbidity?(Y/N): Canopy (% open): 0 Were samples collected for water chemistry? (Y/N): N	County: Vinton	Township/City_Swan	
Photo-documentation Notes: 3567-upstream, 3568-downstream, 3569-substrates Elevated Turbidity?(Y/N): N	MISCELLANEOU	US	
Elevated Turbidity?(YM): N	Base Flow Conditions? (?//	N): Y Date of last precipitation: 9/28/20 Quantity: 0.49	
Were samples collected for waterchemistry? (Y/N): Lab Sample, # or ID (attach results): Phi (S.U.) Conductivity (umhos/cm)	Photo-documentation Note:	3567-upstream, 3568-downstream, 3569-substrates	
Were samples collected for water chemistry? (Y/N): Lab Sample # or ID (attach results): Field Measures: Temp (*C)	A series of the		
Field Measures:Temp (*C) Dissolved Oxygen (mg/l) PH (S.U.) Conductivity (umhos/cm)	Or officer modern and a few factors		
Additional comments/description of pollution impacts: Stream channel ends at old road bed, evidence of flow conti Overall Stability of BOTH Stream Banks (check one): Stable Moderately Stable Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known): Salamanders Observed? (Y/N) N Species observed (if known): Salamanders Observed? (Y/N) N Species observed (if known): Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): Comments Regarding Biology: none present DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed include imp			
Additional comments/description of pollution impacts: Stream channel ends at old road bed, evidence of flow conti Overall Stability of BOTH Stream Banks (check one): Stable	and the second section of the second		
Overall Stability of BOTH Stream Banks (check one): Stable Stable Moderately Stable Unstable	is the sampling reach repre	esentative of the stream (Y/N) If not, explain:	
Overall Stability of BOTH Stream Banks (check one): Stable Moderately Stable Moderately Stable Unstable			
BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known): Salamanders Observed? (Y/N) N Species observed (if known): Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): Comments Regarding Biology: none present DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed include im: Programments of the stream's location of the st	Additional comments/descr	eription of pollution impacts: Stream channel ends at old road bed, evidence of flow co	ntin
(Record all observations below) Fish Observed? (Y/N) N Species observed (if known): Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): Salamanders Observed? (Y/N) N Species observed (if known): Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): Comments Regarding Bjology: none present DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed include im: **description of the stream's location of the stream's	Overall Stability of BOTH	H Stream Banks (check one): Stable	
Fish Observed? (Y/N) N Species observed (if known): Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): Salamanders Observed? (Y/N) N Species observed (if known): Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): Comments Regarding Biology: none present DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed include improved include improved the stream's location of the stream's loca	- · · · · · · · · · · · · · · · · · · ·		
Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): Salamanders Observed? (Y/N) N Species observed (if known): Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): Comments Regarding Biology: none present DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed include impact to the stream's location of the stream's location.		BIOLOGICAL OBSERVATIONS	_
Salamanders Observed? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Species observed (if known): Comments Regarding Biology: none present DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed include im: Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known):		(Report all observations below)	
Aquatic Macroinvertebrates Observed? (Y/N) Species observed (if known): Comments Regarding Biology; none present DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed include im: Include im: Advantage observed (if known): DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed include im:	Fish Observed? (Y/N) N	(Report all observations below) Species observed (if known):	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed Include imp	Fish Observed? (Y/N) N	(Report all observations below) Species observed (if known): red? (YM) N Species observed (if known):	
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Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project

Project No. 60624128

Stream 01

Date:

September 30, 2020

Description:

Ephemeral

Modified Class I PHW

Facing Upstream



Stream 01

Date:

September 30, 2020

Description:

Ephemeral

Modified Class I PHW

Facing Downstream





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project

Project No.

60624128

Stream 01

Date:

September 30, 2020

Description:

Ephemeral

Modified Class I PHW

Substrate

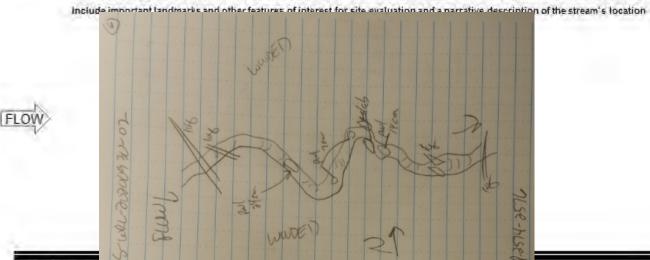


TE NAME/LOCATION				
TE NUMBER RIVER BASIN _	RIVER			
NGTH OF STREAM REACH (ft)	LAT	LONG	RIVER MILE	
ATESCORER	COMMENTS			
TE: Complete All Items On This Form REAM CHANNEL MODIFICATIONS:				
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts]	cant substrate types found (Ma: RCENT TYPE SILT LEAF FINE I CLAY NUCK ARTIF			HHE Netri Point ubstr Nax = 1
Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock ORE OF TWO MOST PREDOMINATE SUBS	(A) Ch	FAL NUMBER OF SUBST		A + B
Maximum Pool Depth (Measure the, time of evaluation Avoid plunge pools > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	from road culverts or storm wat 5 cn 5 cn		Yone box); N	ool De fax = :
COMMENTS		MAXIMUM POOL DEPTH	(centimeters):	_
BANK FULL WIDTH (Measured as th > 4.0 meters (>13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	□ > 1:0 □ ≤1:0	ents) (Check ONLYon m - 1.5 m (> 3' 3" - 4' 8") m (≤ 3' 3")[5 pts]	[15 pts]	Bankf Width Nax=3
COMMENTS	1	AVERAGE BANKFULL V	VIDTH (meters)	
Anti-Maria de Anne Maria en Anne	This information musta		7. (20) 200 200 200	
RIPARIAN ZONE AND FLOOD				
RIPARIAN WIDTH	L R	<u>LITY</u> (Most Predominant p L R	er Bank)	
	Mature Forest, Wet Immature Forest, S Residential, Park, N Fenced Pasture	land	Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction	
FLOW REGIME (At Time of Eva Stream Flowing Subsurface flow with isolated po COMMENTS		A Section of the second section in the second section is	pools, no flow (intermittent) ephemeral)	
	per 61 m (200 ft) of channel) (Check ONLY one box).		

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

Acres (- III - Miller)	No QHEI Score (If Yes, Attach Completed QHEI form)
DOWNSTREAM DESIGNATED U	
☐ WWH Name:	Distance from Evaluated Stream
CVVH Name:	Distance from Evaluated Stream
EVVH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MA	PS, INCLUDING THE <u>entire</u> water shed area. Clearly Mark the site location.
JSGS Quadrangle Name;	NRCS Soil Map Page;NRCS Soil Map Stream Order;
County:	Township/City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N); Date	of last precipitation: Quantity:
Photo-documentation Notes:	
Elevated Turbidity?(Y/N): Can	opy (% open):
	opy (% open):
Were samples collected for waterchemistry	?(Y/N): Lab Sample # or iD (attach results);
Were samples collected for waterchemistry	?(Y/N):
Were samples collected for waterchemistry	?(Y/N): Lab Sample # or iD (attach results):
Field Measures:Temp (°C) Dissol	?(Y/N): Lab Sample # or ID (attach results): yed Oxygen (mg/l) pH (S,U.) Conductivity (umhos/cm) stream (Y/N) If not, explain:
Were samples collected for waterchemistry Field Measures:Temp (°C) Dissolution s the sampling reach representative of the s	?(Y/N): Lab Sample # or ID (attach results): ved Oxygen (mg/l) pH (S,U.) Conductivity (umhos/cm) stresm (Y/N) If not, explain: impacts:
Were samples collected for waterchemistry Field Measures:Temp (°C) Dissolution s the sampling reach representative of the s	?(Y/N): Lab Sample # or ID (attach results): yed Oxygen (mg/l) pH (S,U.) Conductivity (umhos/cm) stream (Y/N) If not, explain:
Were samples collected for waterchemistry Field Measures:Temp (°C) Dissolution s the sampling reach representative of the sampling reach representative representative of the sampling reach representative re	PH (S.U.) Conductivity (umhos/cm) stream (Y/N) If not, explain: impacts: BIOLOGICAL OBSERVATIONS (Record all observations below)
Were samples collected for waterchemistry Field Measures:Temp (°C) Dissolves the sampling reach representative of the second distribution of pollution Additional comments/description of pollution Fish Observed? (Y/N) Species observed.	P(Y/N): Lab Sample # or ID (attach results): wed Oxygen (mg/l) pH (S,U.) Conductivity (umhos/cm) stream (Y/N) If not, explain: impacts: Biological observations below: served (if known): served (if known): **Total all observations below: **Total all observations below: **Total all observations below: **Total all observations below:
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DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project

Project No. 60624128

Stream 02

Date:

September 30, 2020

Description:

Intermittent

Class III PHW

Facing Upstream



Stream 02

Date:

September 30, 2020

Description:

Intermittent

Class III PHW

Facing Downstream





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project

Project No.

60624128

Stream 02

Date:

September 30, 2020

Description:

Intermittent

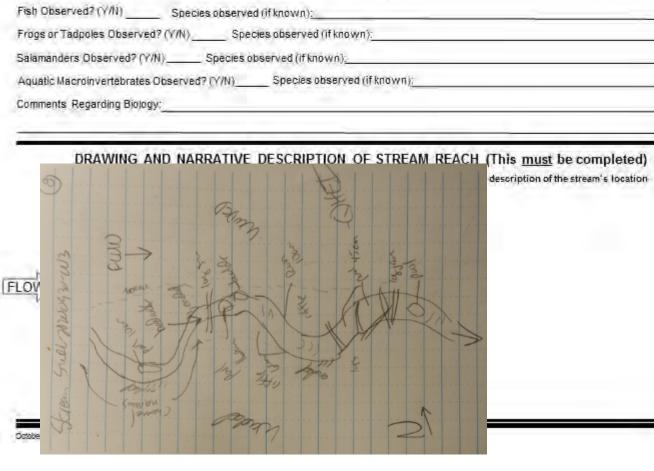
Class III PHW

Substrate



TE NAME/LOCATION				
TE NUMBER RIVER BASIN _	RIVER			
NGTH OF STREAM REACH (ft)	LAT	LONG	RIVER MILE	
ATESCORER	COMMENTS			
TE: Complete All Items On This Form REAM CHANNEL MODIFICATIONS:				
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts]	cant substrate types found (Ma: RCENT TYPE SILT LEAF FINE I CLAY NUCK ARTIF			HHE Netri Point ubstr Nax = 1
Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock ORE OF TWO MOST PREDOMINATE SUBS	(A) Ch	FAL NUMBER OF SUBST		A + B
Maximum Pool Depth (Measure the, time of evaluation Avoid plunge pools > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	from road culverts or storm wat 5 cn 5 cn		Yone box); N	ool De fax = :
COMMENTS		MAXIMUM POOL DEPTH	(centimeters):	_
BANK FULL WIDTH (Measured as th > 4.0 meters (>13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	□ > 1:0 □ ≤1:0	ents) (Check ONLYon m - 1.5 m (> 3' 3" - 4' 8") m (≤ 3' 3")[5 pts]	[15 pts]	Bankf Width Nax=3
COMMENTS	1	AVERAGE BANKFULL V	VIDTH (meters)	
Anti-Maria de Anne Maria en Anne	This information musta		7. (20) 200 200 200	
RIPARIAN ZONE AND FLOOD				
RIPARIAN WIDTH	L R	<u>LITY</u> (Most Predominant p L R	er Bank)	
	Mature Forest, Wet Immature Forest, S Residential, Park, N Fenced Pasture	land	Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction	
FLOW REGIME (At Time of Eva Stream Flowing Subsurface flow with isolated po COMMENTS		A Section of the second section in the second section is	pools, no flow (intermittent) ephemeral)	
	per 61 m (200 ft) of channel) (Check ONLY one box).		

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) Distance from Evaluated Stream □ WWH Name: CWH Name: Distance from Evaluated Stream EVVH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. NRCS Soil Map Page; ______NRCS Soil Map Stream Order; ______ USGS Quadrangle Name; Township/City:__ County:___ MISCELLANEOUS Base Flow Conditions? (Y/N): Date of last precipitation: Quantity: Photo-documentation Notes: ____ Elevated Turbidity?(Y/N): _____ Canopy (% open): _____ Were samples collected for waterchemistry?(Y/N): _____ Lab Sample # or ID (attach results): _____ Field Measures:Temp (°C) ______ Dissolved Oxygen (mg/l) _____ pH (S,U.) _____ Conductivity (umhos/cm) is the sampling reach representative of the stream (Y/N) _____ If not, explain: _____ Additional comments/description of pollution impacts: BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) _____ Species observed (if known): Frogs or Tadpoles Observed? (Y/N) Species observed (if known): Salamanders Observed? (Y/N) _____ Species observed (if known):____ Aquatic Macroinvertebrates Observed? (Y/N) Species observed (if known): Comments Regarding Biology:





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project

Project No. 60624128

Stream 03

Date:

September 30, 2020

Description:

Intermittent

Class III PHW

Facing Upstream



Stream 03

Date:

September 30, 2020

Description:

Intermittent

Class III PHW

Facing Downstream





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project

Project No. 60624128

Stream 03

Date:

September 30, 2020

Description:

Intermittent

Class III PHW

Substrate



TE NAME/LOCATION		
TE NUMBER RIVER BASIN	RIVER CODE	DRAINAGE AREA (mi²)
NGTH OF STREAM REACH (ft)	LATLONG	RIVER MILE
ATE SCORER	COMMENTS	
		or Ohio's PHWH Streams" for Instruction D RECOVERING RECENT OR NO RECOV
(Max of 32), Add total number of signification of the period of the peri	FINE DETRITUS [metric score is sum of boxes A & B PERCENT DY DEBRIS [3 pts] 3 pts] V [0 pt] MHE Metri Point Substr Max = 0
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock ORE OF TWO MOST PREDOMINATE SUBS	(A) Check	(B) A + B
	maximum pool depth within the 61 meter from road culverts or storm water pipes) 5 cm - 10 cm [18] < 5 cm [5pts] NO WATER OR 1	(Check ONLY one box); Max = :
COMMENTS	MAXIMUM	POOL DEPTH (centimeters):
BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	eaverage of 3 - 4 measurements) (Che	3' 3" - 4' 8")[15 pts] Widtl
COMMENTS	AVERAGE E	SANKFULL WIDTH (meters)
	This information <u>must</u> also be comp	
	PLAIN QUALITY + NOTE. River Left (L)	
RIPARIAN WIDTH	FLOODPLAIN QUALITY (Most F	L R
	Mature Forest, Wetland Immature Forest, Shrub or Old Residential, Park, New Field Fenced Pasture	Conservation Tillage
COMMENTS FLOW REGIME (At Time of Eva Stream Flowing Subsurface flow with isolated por COMMENTS	Moist Cha	nnel, isolated pools, no flow (intermittent) el, ло water (ephemeral)
	per 61 m (200 ft) of channel) (Check ONL)	one box).

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) Distance from Evaluated Stream ☐ WWH Name: CWH Name: Distance from Evaluated Stream EVVH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. NRCS Soil Map Page; ______NRCS Soil Map Stream Order; ______ USGS Quadrangle Name; _____Township/City:___ County:___ MISCELLANEOUS Base Flow Conditions? (Y/N): Date of last precipitation: Quantity: Photo-documentation Notes: Elevated Turbidity?(Y/N): _____ Canopy (% open): _____ Were samples collected for waterchemistry? (Y/N): Lab Sample # or iD (attach results): Field Measures:Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (umhos/cm) is the sampling reach representative of the stream (V/N) _____ If not, explain: _____ Additional comments/description of pollution impacts: BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (V/N) _____ Species observed (if known): Frogs or Tadpoles Observed? (Y/N) Species observed (if known): Salamanders Observed? (Y/N) _____ Species observed (if known):____ Aquatic Macroinvertebrates Observed? (Y/N) Species observed (if known): Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include im tion of the stream's location



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project

Project No. 60624128

Stream 04

Date:

September 30, 2020

Description:

Intermittent

Class III PHW

Facing Upstream



Stream 04

Date:

September 30, 2020

Description:

Intermittent

Class III PHW

Facing Downstream





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project

Project No.

60624128

Stream 04

Date:

September 30, 2020

Description:

Intermittent

Class III PHW

Substrate





APPENDIX E

HABITAT PHOTOGRAPHS



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60582598

Photo 1

Date:

September 30, 2020

Description:

Grassland habitat within proposed ROW

Facing Northeast



Photo 2

Date:

September 30, 2020

Description:

Hay field/pasture habitat within proposed ROW

Facing South





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60582598

Photo 3

Date:

October 1, 2020

Description:

Old field habitat within proposed ROW

Facing North



Photo 4

Date:

October 1, 2020

Description:

Landscaped area habitat within proposed ROW

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60582598

Photo 5

Date:

November 21, 2018

Description:

Mixed mesophytic forest habitat within proposed ROW

Facing West



Photo 6

Date:

October 1, 2020

Description:

Scrub-shrub habitat within proposed ROW

Facing West





APPENDIX F

AGENCY CORRESPONDENCE



MARY MERTZ, DIRECTOR

Office of Real Estate John Kessler, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229 Phone: (614) 265-6621 Fax: (614) 267-4764

October 19, 2020

Stacey Mueller AECOM 525 Vine Street Cincinnati, Ohio 45202

Re: 20-806; Fiddlestix Switch-Illesboro South Central 138 kV Transmission Line Project

Project: The proposed project involves installing approximately 1.5 miles of greenfield 138 kV transmission line to tie the new Illesboro delivery point to the Lemaster-Ross 138 kV circuit and the installation of a new three-way phase over phase 138 kV switch to serve the new Illesboro delivery point.

Location: The proposed project is located in Swan Township, Vinton County, Ohio.

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

Natural Heritage Database: The Natural Heritage Database has no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no other records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980.

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

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

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

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (Myotis septentrionalis), a state endangered and federally threatened species, the little brown bat (Myotis lucifugus), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH \geq 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31, however, limited summer tree cutting may be acceptable after consultation with DOW (contact Sarah Stankavich, sarah.stankavich@dnr.state.oh.us).

The DOW also recommends that a desktop habitat assessment, followed by a field assessment if needed, is conducted to determine if there are potential hibernaculum(a) present within the project area. Information about how to conduct habitat assessments can be found in the current USFWS "Range-wide Indiana Bat Survey Guidelines." If a habitat assessment finds that potential hibernacula are present within 0.25 miles of the project area, please send this information to Sarah Stankavich, sarah.stankavich@dnr.state.oh.us for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of little spectaclecase (*Villosa lienosa*), a state endangered mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact this species.

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, the Ohio lamprey (*Ichthyomyzon bdellium*), a state endangered fish, the spotted darter (*Etheostoma maculatum*), a state endangered fish, and the Tippecanoe darter (*Etheostoma tippecanoe*), a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the timber rattlesnake (*Crotalus horridus*), a state endangered species, and a federal species of concern. The timber rattlesnake is a woodland species. In addition to using wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the midland mud salamander (*Pseudotriton montanus diastictus*), a state threatened species. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 15 to August 1. If this habitat will not be impacted, this project is not likely to impact this species.

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

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

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

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

ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at (614) 265-6397 or Sarah.Tebbe@dnr.state.oh.us if you have questions about these comments or need additional information.

Mike Pettegrew Environmental Services Administrator (Acting)

Mueller, Stacey

From: Ohio, FW3 <ohio@fws.gov>

Sent: Wednesday, October 7, 2020 2:56 PM

To: Mueller, Stacey

Cc: nathan.reardon@dnr.state.oh.us; Parsons, Kate; todd.hess@usda.gov;

katrina.schultes@usda.gov

Subject: [EXTERNAL] AEP Fiddlestix Switch-Illesboro South Central 138 kV Transmission Line

Project in Vinton County, Ohio

Follow Up Flag: Follow up Flag Status: Flagged



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

TAILS #03E15000-2021-TA-0064

Dear Ms. Mueller,

The U.S Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. It appears that this project may cross the Wayne National Forest and a federal authorization from the Forest Service may be required. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA) on both private and federal property.

Federally Threatened and Endangered Species: The endangered Indiana bat (Myotis sodalis) and threatened northern long-eared bat (Myotis septentrionalis) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see http://www.fws.gov/midwest/endangered/mammals/nleb/index.html), incidental take of Indiana

http://www.fws.gov/midwest/endangered/mammals/nleb/index.html), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year (see exception below). Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer surveys may only be conducted between June 1 and August 15. However, for all projects that cross the Wayne National Forest and require Forest Service authorization, seasonal tree clearing is still required (regardless of presence/absence survey results) to be in compliance with the Land and Resource Management Plan (i.e., the Forest Plan). If meeting timing restrictions is a concern, contact the Wayne National Forest as early as possible for more information on the process and potential alternatives.

The proposed project lies within the range of the endangered **running buffalo clover** (Trifolium stoloniferum). Known locations of this plant occur within the same township as the proposed project. This plant can be found in partially shaded woodlots, mowed areas (lawns, parks, cemeteries), and along streams and trails. Running buffalo clover requires periodic disturbance and a somewhat open habitat to successfully flourish, but cannot tolerate full-sun, full-shade, or severe disturbance. If suitable habitat is present, we recommend that surveys for this species be conducted by a trained botanist in May or June when the plant is in flower. The survey must be coordinated with the Ohio Field Office in advance.

<u>Surveys for Federally Listed Plant Species</u>: Federally listed plants are always protected on federal property under the ESA. Please be aware that for projects on the Wayne National Forest that require federal authorization, you may be requested to provide additional information on the potential of the project area to provide habitat for running buffalo clover (Trifolium stoloniferum), small whorled pogonia (Isotria medeoloides), northern monkshood (Aconitum noveboracense), and Virginia spiraea (Spiraea virginiana). In addition, season-specific surveys for these species may also be requested by the Forest Service to ensure compliance with the ESA and the Forest Plan.

<u>Section 7 Coordination:</u> If this project crosses the Wayne National Forest and requires federal authorization, or if there is another federal nexus for the project (e.g., federal funding provided, federal permits required), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is

completed. We recommend the federal action agency submit a determination of effects to this office, relative to federally listed bats and plants, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources and the Wayne National Forest due to the potential for the proposed project to affect state listed species and/or state and federal lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us. For projects on Wayne National Forest we recommend that you contact Todd Hess at (740) 753-0980 or at todd.hess@usda.gov.

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

Sincerely,

Patrice M. Ashfield Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW Kate Parsons, ODNR-DOW Todd Hess, WNF Katrina Schultes, WNF



APPENDIX G

DESKTOP ASSESSMENT FOR WINTER BAT HABITAT

FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138KV TRANSMISSION LINE

VINTON COUNTY, OHIO

DESKTOP ASSESSMENT FOR WINTER BAT HABITAT

Prepared for:

American Electric Power Ohio Transmission Company 8600 Smith Mill Road

New Albany, Ohio 43054



Prepared by:

A=COM

525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Project #: 60624128

March 2022



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- 2) USGS TOPOGRAPHICAL MAP
- 3) KNOWN MINING ACTIVITY MAP
- 4) KARST GEOLOGY AND SINKHOLES MAP
- 5) PHOTOGRAPH LOCATION MAP

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- A) ODNR ENVIRONMENTAL REVIEW 20-806; AEP FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL 138 KV TRANSMISSION LINE PROJECT DATED OCTOBER 19, 2020
- B) USFWS TECHNICAL ASSISTANCE (03E15000-20210-TA-0064); AEP FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL 138 KV TRANSMISSION LINE PROJECT DATED OCTOBER 7, 2020
- C) REPRESENTATIVE PHOTOGRAPHS OF HABITAT WITHIN PROJECT SURVEY AREA



1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing to install approximately 1.8 miles of greenfield 138 kV transmission line in Vinton County, Ohio (Project). The greenfield route is to tie the new Ilesboro delivery point to the Lemaster-Ross 138kV circuit. Approximately 0.01 mile of 138 kV line on the existing Poston-Ross 138 kV Transmission Line is also included in the Project. The Project is located on New Plymouth, Ohio U.S. Geologic Survey 7.5" topographic quadrangle (Appendix A, Figure 1 – Agency Overview Map).

The Project is designed to be predominately within the former maintained transmission line ROW located mostly within agricultural fields, grassy area, and old fields. AEP Ohio Transco plans to utilize new and existing access roads to the transmission line ROW. The Project is mostly located within open land which will not require tree clearing; however, some portions of the ROW will cross forested habitats and tree clearing will be required for the Project. AEP Ohio Transco intends for tree clearing activities to occur between October 1st and March 31st to avoid adverse effects to state and/or federally listed bat species during the active (non-hibernating) season.

2.0 METHODS

AECOM reviewed publicly available data to identify underground voids which could be potential hibernation sites for overwintering bats (hibernacula). Typical hibernation sites for the *Myotis* bats native to Ohio include natural karst caves/sinkholes, underground mines with exposed entrances/air vents, and other underground voids which maintain suitable temperatures, humidity, and air circulation throughout the winter months. To identify such features, AECOM reviewed the following desktop resources:

- USGS topographical maps (U.S. Geological Survey, 2019 and USGS 2016)
- Aerial photography (ESRI, 2020)
- USFWS Technical Assistance (Attachment B)
- ODNR Guidance Letter (Attachment A)
- ODNR Division of Mineral Resources and Geological Survey data for:
 - Known mining activity (ODNR, 2020a)
 - Karst geology and sinkholes (ODNR, 2020b)

AECOM compared the Project area and 0.25-mile buffer to the information provided by each of these resources and reviewed them for indications of likely underground voids. Figure 2 – USGS Topographical Map shows the Project and its 0.25-mile buffer on a USGS background. Figure 3 – Known Mining Activity Map depicts the Project and its 0.25-mile buffer in relation to known records of mining activity as recorded by the ODNR. Figure 4 – Karst Geology and Sinkholes Map depicts the Project and its 0.25-mile buffer with



known locations of karst geology and sinkholes. Aerial photography is shown as the background in Figure 3 and Figure 4.

3.0 RESULTS

Based on the available desktop resources, two underground mine locations of unknown extent were identified within 0.25-mile of the Project. These Underground Mine location points are within documented surface coal mine operations. ODNR mining records also indicate that three historic surface mines are present in the Project survey corridor; however, these features are unlikely provide suitable winter hibernaculum for *Myotis* bat species (Figure 3 – Known Mining Activity Map).

Review of the ODNR Karst Interactive Map identified no karst features within 0.25-mile of the Project area (Figure 4 – Karst Geology and Sinkholes Map).

4.0 CONCLUSION AND DISCUSSION

AECOM completed the due diligence winter bat habitat desktop assessment in February 2022. As result, two records of underground mines or mine openings were identified within 0.25-mile of the Project. These points are within mapped surface coal mine operations. No karst features are located within the survey area or within a 0.25-mile buffer around it. Project activities are unlikely to significantly affect any potential hibernacula associated with karst features outside of a 0.25-mile buffer of the Project survey corridor.

The proposed clearing activities for the Project are associated with minor vegetation removal of saplings, shrubs, minor side-trimming, as well as limited amounts of tree clearing within forested habitats. None of the areas of significant tree clearing are within 0.25-mile of the underground mines identified during the desktop assessment. Within 0.25-mile of the underground mines, the Project is located within open habitats or co-located with existing utility and road corridors. Therefore, no adverse effects to overwintering bat populations are likely to occur. Representative photographs of the habitat within the Project area are provided as Attachment C and locations of photographs are displayed on Figure 5: Photograph Location Map.

5.0 LITERATURE CITED

ESRI, 2020. World Imagery obtained from Earthstar Geographics (TerraColor NextGen) imagery.

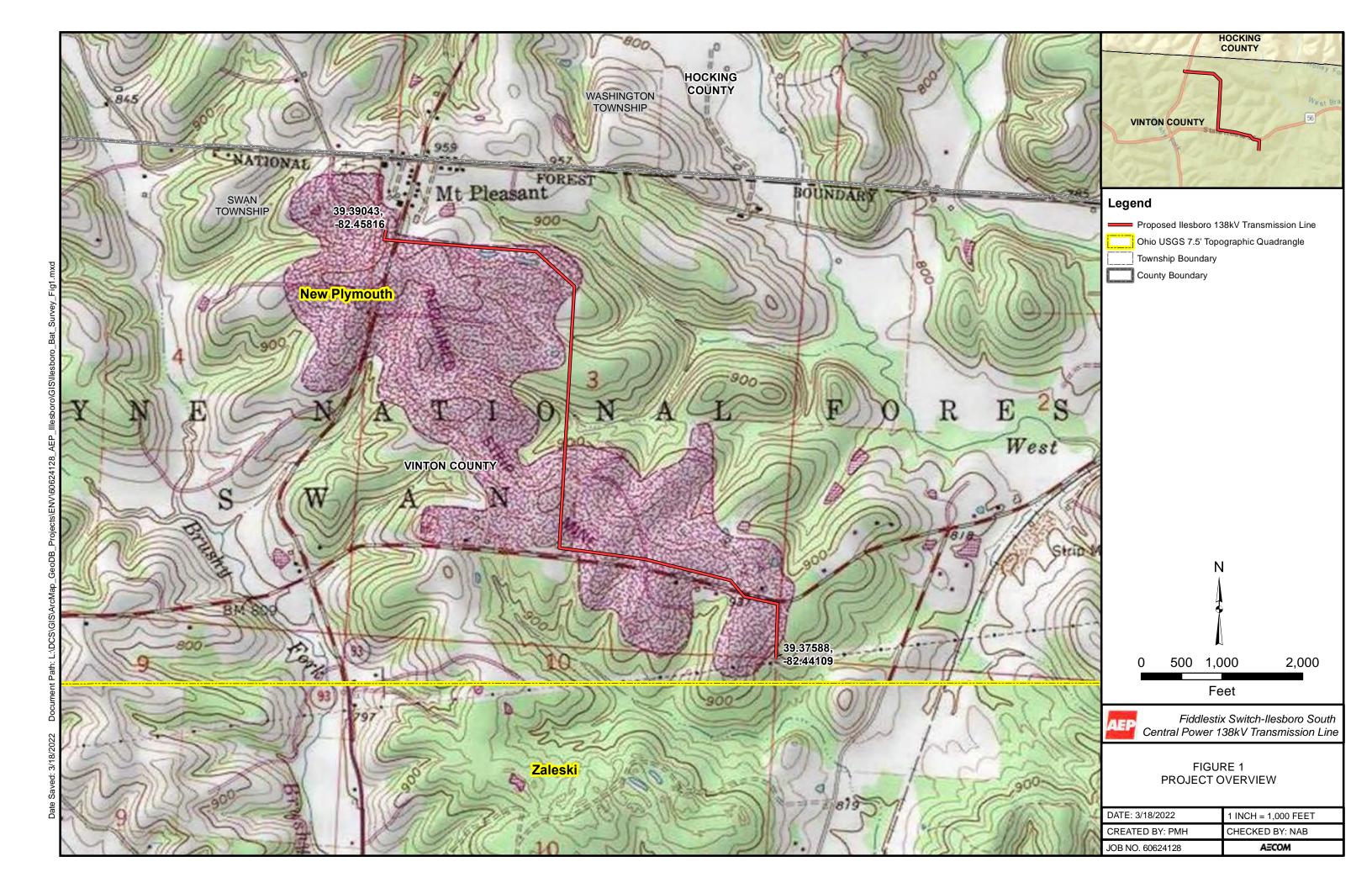
Ohio Department of Natural Resources. 2020a. Division of Mineral Resources and Geological Survey, Mines of Ohio Interactive Map access at https://gis.ohiodnr.gov/MapViewer/?config=OhioMines on February 18, 2022.

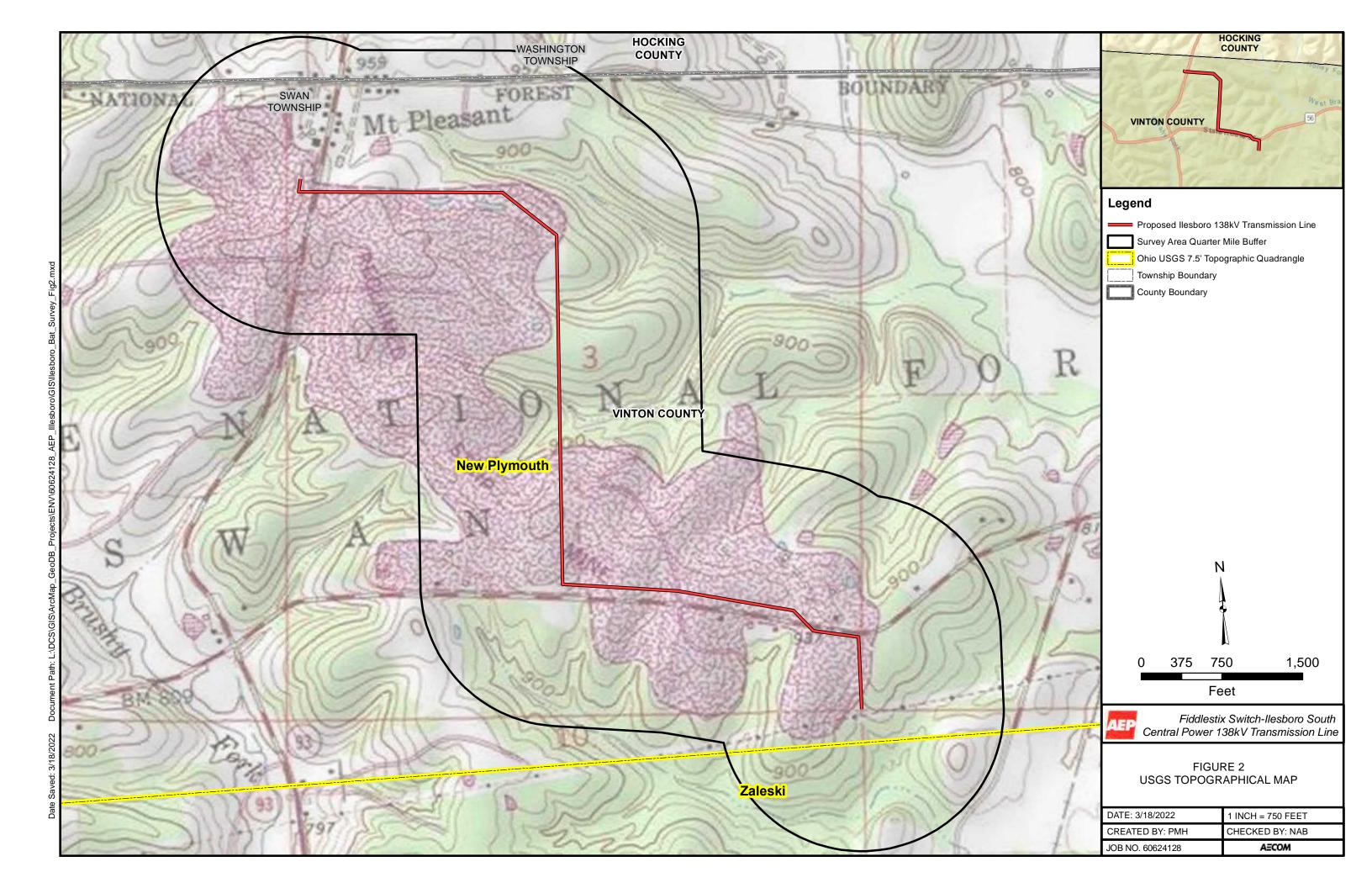


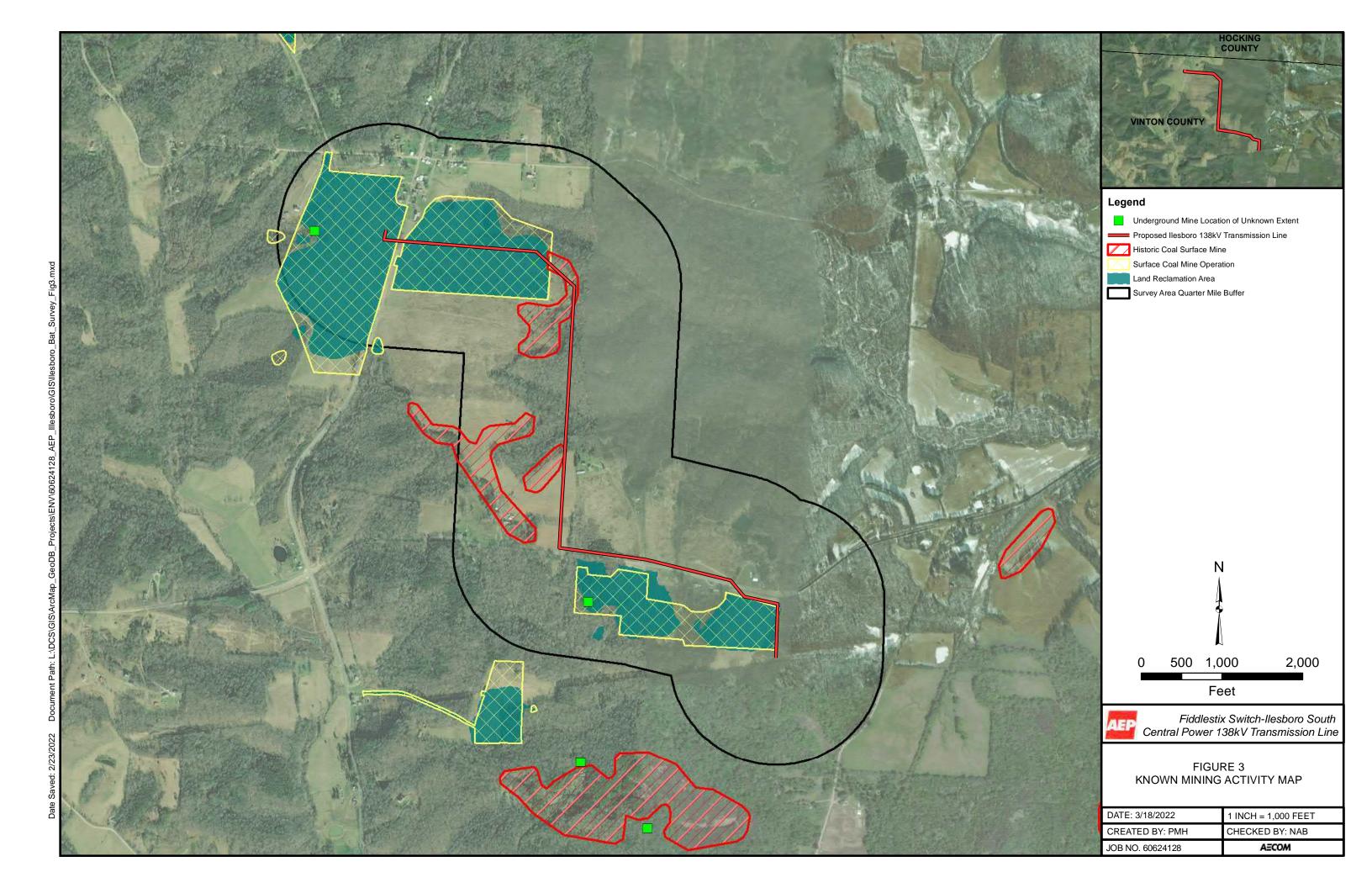
- Ohio Department of Natural Resources. 2020b. Division of Geological Survey, Karst Interactive Map access at https://gis.ohiodnr.gov/website/dgs/karst_interactivemap/ on February 18, 2022.
- U.S. Geological Survey, 2019. USGS US Topo 7.5-minute maps for New Plymouth, OH 2019: USGS National Geospatial Technical Operations Center (NGTOC).
- U.S. Geological Survey, 2016. USGS US Topo 7.5-minute maps for Zaleski, OH 2016: USGS National Geospatial Technical Operations Center (NGTOC).

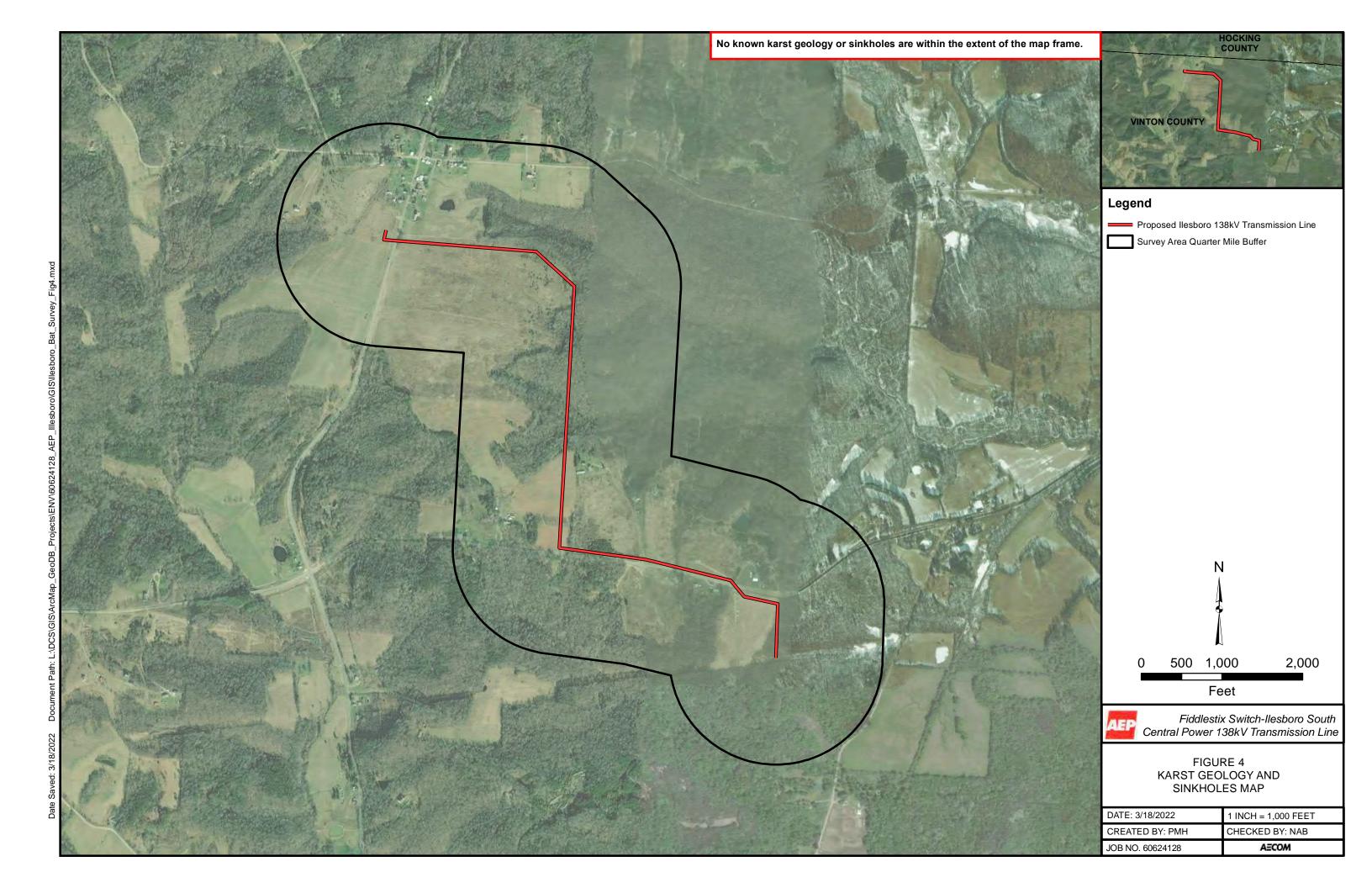


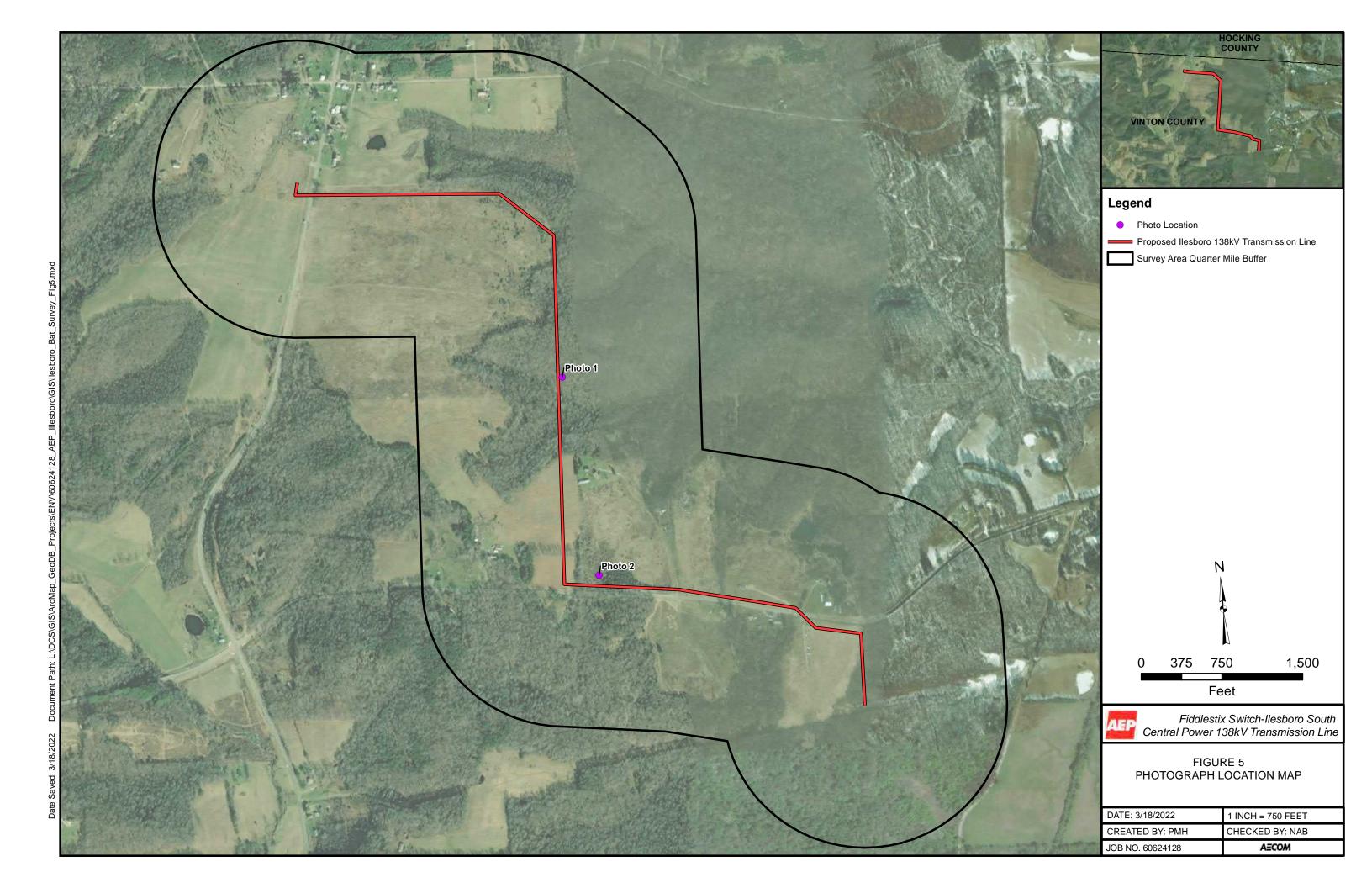
FIGURES













ATTACHMENT A:

ODNR ENVIRONMENTAL REVIEW – 20-806; AEP FIDDLESTIX-ILESBORO SOUTH 138 KV TRANSMISSION LINE PROJECT

DATED OCTOBER 19, 2020



MARY MERTZ, DIRECTOR

Office of Real Estate John Kessler, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229 Phone: (614) 265-6621 Fax: (614) 267-4764

October 19, 2020

Stacey Mueller AECOM 525 Vine Street Cincinnati, Ohio 45202

Re: 20-806; Fiddlestix Switch-Illesboro South Central 138 kV Transmission Line Project

Project: The proposed project involves installing approximately 1.5 miles of greenfield 138 kV transmission line to tie the new Illesboro delivery point to the Lemaster-Ross 138 kV circuit and the installation of a new three-way phase over phase 138 kV switch to serve the new Illesboro delivery point.

Location: The proposed project is located in Swan Township, Vinton County, Ohio.

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

Natural Heritage Database: The Natural Heritage Database has no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no other records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980.

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

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

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

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (Myotis septentrionalis), a state endangered and federally threatened species, the little brown bat (Myotis lucifugus), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH \geq 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31, however, limited summer tree cutting may be acceptable after consultation with DOW (contact Sarah Stankavich, sarah.stankavich@dnr.state.oh.us).

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The project is within the range of little spectaclecase (*Villosa lienosa*), a state endangered mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact this species.

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, the Ohio lamprey (*Ichthyomyzon bdellium*), a state endangered fish, the spotted darter (*Etheostoma maculatum*), a state endangered fish, and the Tippecanoe darter (*Etheostoma tippecanoe*), a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the timber rattlesnake (*Crotalus horridus*), a state endangered species, and a federal species of concern. The timber rattlesnake is a woodland species. In addition to using wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the midland mud salamander (*Pseudotriton montanus diastictus*), a state threatened species. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

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The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 15 to August 1. If this habitat will not be impacted, this project is not likely to impact this species.

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

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

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

 $\frac{http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community}{\%20Contact%20List_8_16.pdf}$

ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at (614) 265-6397 or Sarah.Tebbe@dnr.state.oh.us if you have questions about these comments or need additional information.

Mike Pettegrew Environmental Services Administrator (Acting)



ATTACHMENT B:

USFWS TECHNICAL ASSISTANCE (03E15000-2021-TA-0064); AEP FIDDLESTIX-ILESBORO SOUTH 138 KV TRANSMISSION LINE PROJECT

DATED OCTOBER 7, 2020

Mueller, Stacey

From: Ohio, FW3 <ohio@fws.gov>

Sent: Wednesday, October 7, 2020 2:56 PM

To: Mueller, Stacey

Cc: nathan.reardon@dnr.state.oh.us; Parsons, Kate; todd.hess@usda.gov;

katrina.schultes@usda.gov

Subject: [EXTERNAL] AEP Fiddlestix Switch-Illesboro South Central 138 kV Transmission Line

Project in Vinton County, Ohio

Follow Up Flag: Follow up Flag Status: Flagged



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

TAILS #03E15000-2021-TA-0064

Dear Ms. Mueller,

The U.S Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. It appears that this project may cross the Wayne National Forest and a federal authorization from the Forest Service may be required. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA) on both private and federal property.

Federally Threatened and Endangered Species: The endangered Indiana bat (Myotis sodalis) and threatened northern long-eared bat (Myotis septentrionalis) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see http://www.fws.gov/midwest/endangered/mammals/nleb/index.html), incidental take of Indiana

http://www.fws.gov/midwest/endangered/mammals/nleb/index.html), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year (see exception below). Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer surveys may only be conducted between June 1 and August 15. However, for all projects that cross the Wayne National Forest and require Forest Service authorization, seasonal tree clearing is still required (regardless of presence/absence survey results) to be in compliance with the Land and Resource Management Plan (i.e., the Forest Plan). If meeting timing restrictions is a concern, contact the Wayne National Forest as early as possible for more information on the process and potential alternatives.

The proposed project lies within the range of the endangered **running buffalo clover** (Trifolium stoloniferum). Known locations of this plant occur within the same township as the proposed project. This plant can be found in partially shaded woodlots, mowed areas (lawns, parks, cemeteries), and along streams and trails. Running buffalo clover requires periodic disturbance and a somewhat open habitat to successfully flourish, but cannot tolerate full-sun, full-shade, or severe disturbance. If suitable habitat is present, we recommend that surveys for this species be conducted by a trained botanist in May or June when the plant is in flower. The survey must be coordinated with the Ohio Field Office in advance.

<u>Surveys for Federally Listed Plant Species</u>: Federally listed plants are always protected on federal property under the ESA. Please be aware that for projects on the Wayne National Forest that require federal authorization, you may be requested to provide additional information on the potential of the project area to provide habitat for running buffalo clover (Trifolium stoloniferum), small whorled pogonia (Isotria medeoloides), northern monkshood (Aconitum noveboracense), and Virginia spiraea (Spiraea virginiana). In addition, season-specific surveys for these species may also be requested by the Forest Service to ensure compliance with the ESA and the Forest Plan.

<u>Section 7 Coordination:</u> If this project crosses the Wayne National Forest and requires federal authorization, or if there is another federal nexus for the project (e.g., federal funding provided, federal permits required), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is

completed. We recommend the federal action agency submit a determination of effects to this office, relative to federally listed bats and plants, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources and the Wayne National Forest due to the potential for the proposed project to affect state listed species and/or state and federal lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us. For projects on Wayne National Forest we recommend that you contact Todd Hess at (740) 753-0980 or at todd.hess@usda.gov.

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

Sincerely,

Patrice M. Ashfield Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW Kate Parsons, ODNR-DOW Todd Hess, WNF Katrina Schultes, WNF



ATTACHMENT C:

REPRESENTATIVE PHOTOGRAPHS OF HABITAT WITHIN PROJECT SURVEY AREA



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Photo 1

Date:

November 21, 2018

Description:

Mixed mesophytic forest habitat within proposed ROW

Facing West



Photo 2

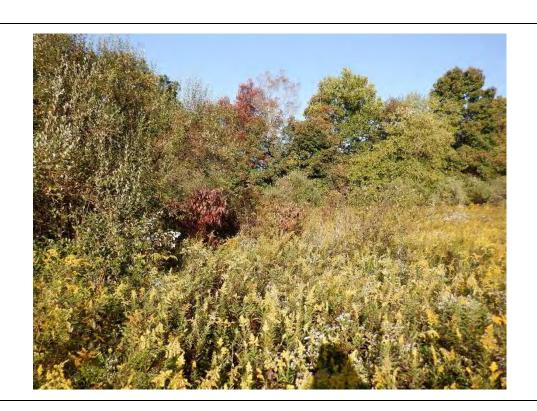
Date:

October 1, 2020

Description:

Scrub-shrub habitat within proposed ROW

Facing West



FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138KV TRANSMISSION LINE PROJECT ADDENDUM 1 – ACCESS ROAD

VINTON 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



Prepared by:



525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Project #: 60624128

March 2022

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SOUTH CENTRAL POWER 138KV TRANSMISSION LINE REBUILD

ADDENDUM PROJECT SURVEY CORRIDOR

TABLE 2 DELINEATED WETLANDS WITHIN THE HARPSTER-WALDO 69KV

TRANSMISSION LINE REBUILD ADDENDUM 1 PROJECT SURVEY

CORRIDOR

FIGURES

Number

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FIGURE 3	Wetland Delineation and Stream Assessment Map
FIGURE 4	Stream Eligibility Map
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APPENDICES

Number

APPENDIX A Habitat and Other Identified Features Photographs

1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing to install approximately 1.8 miles of greenfield 138 kV transmission line in Vinton County, Ohio (Project). The greenfield route is to tie the new Ilesboro delivery point to the Lemaster-Ross 138kV circuit. Approximately 0.01 mile of 138 kV line on the existing Poston-Ross 138 kV Transmission Line is also included in the Project. The proposed Project is illustrated on Figure 1. Since the completion of the original wetland delineation and stream assessment report (Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project – Wetland Delineation and Stream Assessment Report – February 2021 (September 2021 – Report)), AEP Ohio Transco required the survey of additional work areas and one new access road to the Ilesboro south central transmission line to facilitate the rebuild in Vinton County, Ohio (Figure 1). AEP Ohio Transco retained AECOM Technical Services, Inc. (AECOM) to revise the original February 2021 report based on the EPA's 2020 Clean Water Act Section 401 Certification Rule vacatur on October 21, 2021 and to survey the additional 3.75 acres comprising the additional work area and a 50-ft. wide buffer along the associated access road (the Addendum Project survey corridor, see Figure 2).

The identified features that were originally provided in the February 2021 – Report are not referenced in this report unless they fall within the current (March 2022) Project survey corridor. Previously identified features, data forms, photographs, and supporting information of the previous survey of the Project are contained within the Revised February 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 current Project survey corridor (Addendum 1 Project survey corridor).

2.0 METHODOLOGY

A comprehensive methodology of the field surveys and data reviews completed for this report are included in the February 2021 – Report. 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: Eastern Mountains and Piedmont Region* (Version 2.0) (EMP Regional Supplement) (USACE, 2012). In addition, delineated wetlands were classified using the Ohio Environmental Protection Agency (OEPA) Ohio Rapid Assessment Method for Wetlands v. 5.0 (ORAM; Mack, 2001). 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 OEPA's Field Methods for Evaluating Primary Headwater Streams in Ohio (OEPA, 2018).

AECOM submitted a request to Ohio Department of Natural Resources (ODNR) Office of Real Estate – Environmental Review Section as well as the United States Fish and Wildlife Service (USFWS) in August 2020 soliciting comments on the proposed Project. Agency-identified species of concern and available species-specific information was reviewed to identify the various habitat types that listed species are known to inhabit.

3.0 RESULTS

AECOM ecologists walked the Addendum Project survey corridor on February 2, 2022 to conduct the wetland delineation, stream assessment and habitat survey. No wetlands, streams, or ponds were identified within the Addendum Project survey corridor. No previously identified features from the February 2021 – Report were confirmed to extend into the Addendum Project survey corridor. During the field survey of the Addendum Project survey corridor, milkweed plants (Asclepias) were identified amidst old field habitat within the Addendum Project survey corridor. These milkweeds may provide potentially suitable habitat for monarch butterflies. Photographs of vegetative communities within the Addendum Project survey corridor are included in Appendix A and corresponding photograph locations are shown on Figure 3.

3.1 WETLAND DELINEATION

3.1.1 Preliminary Soils Evaluation

Soils were observed and documented as part of the delineation methodology. One soil series with two soil map unit types were observed in the Addendum Project survey corridor. These soil map unit types were both previously identified in the February 2022 – Report and are Bethesda silt loam with 0 to 8 percent slopes and 8 to 25 percent slopes. No new soil map units were identified within the Addendum Project survey corridor. A list of the previously identified soil map units is provided in the February 2022 – Report. Soil map units are illustrated in Figure 2.

3.1.2 National Wetland Inventory Map Review

According to the NWI data covering the Project area, the Addendum Project survey corridor does not contain any mapped NWI wetlands. The locations of mapped NWI wetlands present in the vicinity of the Addendum Project survey corridor are illustrated on Figure 2.

3.1.3 Delineated Wetlands

During the February 2022 field survey, AECOM did not identify any wetlands within the Addendum Project survey corridor. Additional information on previously identified wetlands, including data forms and photographs, is provided in the February 2021 – Report.

3.2 STREAM CROSSINGS

During the February 2022 field survey, AECOM did not identify any streams in the Addendum Project survey corridor. Data forms, and additional information for previously identified streams within the original Project survey corridor are in the February 2021 – Report.

3.3 OEPA STREAM ELIGIBILITY

The Addendum Project survey corridor is located in the West Branch Racoon Creek and Brushy Fork watersheds (HUC 12: 050901010202 & 050901010203) which are considered "Eligible" by OEPA (OEPA, 2017). This means that this project may be eligible for general 401 water quality certification or 404 nationwide permits if all conditions and limitations are met.

3.4 PONDS

No ponds were identified within the Addendum Project survey corridor.

3.5 VEGETATIVE COMMUNITIES WITHIN THE PROJECT SURVEY CORRIDOR

AECOM ecologists conducted a general habitat survey in conjunction with the stream and wetland field survey in February 2022. Habitat types within the Addendum Project survey corridor included old field and urban area. Habitat descriptions, applicable to the entire Project, and details on the expected impacts of construction are provided below in Table 1. Vegetated land cover is noted on aerial photography provided on Figure 5.

TABLE 1 - VEGETATIVE COMMUNITIES WITHIN THE FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138KV TRANSMISSION LINE REBUILD ADDENDUM PROJECT SURVEY CORRIDOR

Vegetative Community	Description	Approximate Acreage Within the Project Survey Corridor	Approximate Percentage Within the Project Survey Corridor
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey corridor of the Project in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old-field areas within the study corridors and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs. Dominant species include Canada goldenrod (Solidago canadensis), Japanese bristlegrass (Setaria faberi), and Johnson grass (Sorghum halepense).	3.75	100%
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.	0.0	0%
Totals:		3.75	100%



3.6 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation -

AECOM conducted a survey for potential rare, threatened, and endangered species habitat within the Project survey corridor. A summary of the agency coordination responses is provided below. Correspondence letters from the USFWS and ODNR are included with the February 2021 - Report. Table 2 provides a list of species of concern previously identified by ODNR and USFWS regarding the Revised February 2021 – Report, that may be present in the Addendum 1 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						
Indiana bat (<i>Myotis</i> sodalis)	Endangered	Endangered	Winter Indiana bat hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (<i>Carya spp.</i>), oak (<i>Quercus spp.</i>), ash (<i>Fraxinus spp.</i>), birch (<i>Betula spp.</i>), and elm (<i>Ulmus spp.</i>) have been found to be utilized by the Indiana bat. These tree species and many others may be used when dead if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low-density subcanopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey.	No -Within the Addendum Project survey corridor, no potentially suitable summer roosting or winter hibernating habitat was identified.	ODNR-DOW commented that the Project is located within the Indiana bat's range. If trees must be cut, ODNR-DOW recommends implementing seasonally tree cutting (October 1 through March 31), and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. If implementation of seasonal cutting is not feasible, ODNR-DOW recommends conducting a mist net survey or acoustic survey from June 1 to August 15, prior to any cutting. USFWS commented that the Indiana bat occurs throughout the State of Ohio and removal of trees ≥3 inches dbh is recommended to be avoided wherever possible. USFWS commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31 to avoid impacts to Indiana bats.	Potential suitable habitat (woodlands) was observed within the Project survey corridor. If tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.



Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Northern long-eared bat (<i>Myotis</i> septentrionalis)	Threatened	Threatened	Winter hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (<i>Carya</i> spp.), oak (<i>Quercus</i> spp.), ash (<i>Fraxinus</i> spp.), birch (<i>Betula</i> spp.), and elm (<i>Ulmus</i> spp.) have been found to be utilized by this species. These tree species and many others may be used when dead if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low-density subcanopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey. Proximity to water is critical because insect prey density is greater over or near open water. This species has also been found, albeit rarely, roosting in structures like barns and sheds.	No -Within the Addendum Project survey corridor, no potentially suitable summer roosting or winter hibernating habitat was identified.	ODNR-DOW commented that the Project is located within the northern long-eared bat's range. If trees must be cut, ODNR-DOW recommends implementing seasonally tree cutting (October 1 through March 31), and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. If implementation of seasonal cutting is not feasible, ODNR-DOW recommends conducting a mist net survey or acoustic survey from June 1 to August 15, prior to any cutting. USFWS commented that the Northern long-eared bat occurs throughout the State of Ohio and removal of trees ≥3 inches dbh is recommended to be avoided wherever possible. USFWS commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.	Potentially suitable habitat (woodlands) was observed within the Project survey corridor. If tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.



Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Little brown bat (<i>Myotis lucifugus</i>)	Endangered	Threatened	Little brown bats are habitat generalists, using most cover types available to them in a variety of ecosystems. Much of their foraging activity is associated with aquatic habitats, so lakes and streams play a significant factor in habitat use.	No -Within the Addendum Project survey corridor, no potentially suitable summer roosting or winter hibernating habitat was identified.	ODNR-DOW commented that the Project is located within the little brown bat's range. If trees must be cut, ODNR-DOW recommends implementing seasonally tree cutting (October 1 through March 31), and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. If implementation of seasonal cutting is not feasible, ODNR-DOW recommends conducting a mist net survey or acoustic survey from June 1 to August 15, prior to any cutting. USFWS did not comment on this species.	No potentially suitable habitat was observed within the Project survey corridor. If tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.
Tricolored bat (Perimyotis subflavus)	Endangered	None	Tricolored bats are associated with forested landscapes, often in open woods. They can also be found over water and adjacent water edges. Tricolored bats commonly among the leaves or needles of live or dead trees but will also use buildings. The bats hibernate in caves, mines, and rock outcroppings.	No -Within the Addendum Project survey corridor, no potentially suitable summer roosting or winter hibernating habitat was identified.	ODNR-DOW commented that the Project is located within the Indiana bat's range. If trees must be cut, ODNR-DOW recommends implementing seasonally tree cutting (October 1 through March 31), and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 inches. If implementation of seasonal cutting is not feasible, ODNR-DOW recommends conducting a mist net survey or acoustic survey from June 1 to August 15, prior to any cutting. USFWS did not comment on this species.	Potentially suitable habitat (woodlands) was observed within the Project survey corridor. If tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.



Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Reptiles						
Timber rattlesnake (Crotalus horridus)	Endangered	Species of Concern	In addition to wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW indicated that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species.	ODNR DOW determined that this project is not likely to impact this species.
Fish						
Northern brook lamprey (<i>lchthyomyzon fassor</i>)	Endangered	None	The northern brook lamprey inhabits clean headwater areas of creeks and small rivers with coarse gravel to rock bottoms located in once glaciated terrain.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no inwater work is proposed in a perennial stream, the Project is not likely to impact the species.	No potentially suitable habitat was observed within the Project survey corridor. No in-water work is proposed for the Project
Ohio lamprey (<i>lchthyomyzon</i> bdellium)	Endangered	None	The Ohio lamprey inhabits warmwater habitats in the Ohio River basin, including the Allegheny, Wabash, and Upper Tennessee drainages. Depending on the life cycle period, this species either inhabits slow areas with soft substrates and high detrital content, medium to large river systems, or runs and riffles of clean gravel/cobble in smaller streams and rivers.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no inwater work is proposed in a perennial stream, the Project is not likely to impact the species.	No potentially suitable habitat was observed within the Project survey corridor. No in-water work is proposed for the Project
Spotted darter (Etheostoma maculatum)	Endangered	None	This species requires large unpolluted streams, spending most of its time in deep riffles, or pools just downstream, where a gravel-rubble bottom predominates, and bottom current velocity is low.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no inwater work is proposed in a perennial stream, the Project is not likely to impact the species.	No potentially suitable habitat was observed within the Project survey corridor. No in-water work is proposed for the Project



Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates	
Tippecanoe darter (Etheostoma tippecanoe)	Threatened	None	This little darter prefers riffle areas four to 20 inches deep, in clean rivers and large creeks with a bottom of pea-sized, clean gravel and a high bottom current velocity	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no inwater work is proposed in a perennial stream, the Project is not likely to impact the species.	No potentially suitable habitat was observed within the Project survey corridor. No in-water work is proposed for the Project	
Bivalves							
Little spectaclecase (Villosa lienosa)	Endangered	None	This species lives in sandy substrates in slight to moderate current. The mussel prefers mud and typically inhabits small creeks to medium-sized rivers with perennial flow regimes, usually along the banks in slower currents.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW comments that due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species.	No potentially suitable habitat was observed within the Project survey corridor. No in-water work is proposed for the Project	
Birds							
Northern harrier (<i>Circus hudsonis</i>)	Endangered	None	This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands.	Yes- undulating grasslands were identified within the Project survey corridor, which present potentially suitable habitat.	ODNR-DOW recommends that construction should be avoided within the grassland habitat during the species' nesting period of May 15 to August 1. If this type of habitat will not be impacted, the Project is not likely to impact this species.	Potentially suitable habitat (grasslands) was observed within the Project survey corridor. It is recommended that construction within this habitat takes place outside of the bird's nesting period (May 15 to August 1).	
Amphibians							
Eastern hellbender (<i>Cryptobranchus</i> <i>alleganiensis</i>)	Endangered	Species of Concern	The eastern hellbender's habitat consists of shallow, fast-flowing rocky streams. They are generally found in areas with large, intermittent, irregularly shaped rocks, within swift water. They tend to stay away from slow-moving water and muddy banks with slab rock bottoms.	No- Within the Project survey corridor, no potentially suitable habitat was	ODNR-DOW commented that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species.	No potentially suitable habitat was observed within the Project survey corridor. No in-water work	



Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
				observed for this species.		is proposed for the Project.
Midland mud salamander (Pseudotriton montanus diastictus)	Threatened	None	This species inhabits muddy and silty areas along swamps, seeps, bogs, springs, floodplain forests, and headwater streams. Sightings of this species are rare, as the salamanders live underground in burrows.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW commented that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species.	ODNR determined that this project is not likely to impact this species.
Eastern spadefoot toad (Scaphiopus holbrooki)	Endangered	None	This species if found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions.	No- Within the Project survey corridor, no potentially suitable habitat was observed for this species.	ODNR-DOW commented that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species.	No potentially suitable habitat was observed within the Project survey corridor. No in-water work is proposed for the Project.

ODNR Coordination – Coordination with the ODNR was initiated during the planning stages of the Project to obtain records of protected species located in the vicinity of the Project. On October 19, 2020, the ODNR Office of Real Estate Environmental Review Section replied to an emailed request for records of protected species within an extended area around the Project site. The Ohio Natural Heritage Database (ONHD) did not return records of state endangered or threatened plant or animal species within a one-mile radius of the Project area. Additionally, the ONHD did not return records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species.

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

The ODNR DOW also stated that due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact the little spectaclecase, the timber rattlesnake, the eastern hellbender, the midland mud salamander, or the eastern spadefoot toad. Impacts to these species are still not anticipated as a result of the Project as no additional water features or wooded areas were observed in the Addendum Project survey corridor.

ODNR-DOW recommends 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. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance; however, limited summer or winter tree cutting may be acceptable after consultation with DOW. In addition to conducting a general habitat survey in September and October 2020, AECOM performed a limited desktop habitat assessment to determine potential hibernaculum(a) within the Project area. Two underground mines were identified within 0.25-mile of the Project corridor; however, no significant tree clearing is anticipated within portions of ROW that are within 0.25-mile of those locations. The desktop habitat assessment can be found as Attachment G in the original report.

USFWS Coordination – Coordination with the USFWS was also initiated during the planning stages of the Project to obtain technical assistance in regard to federally listed species that may occur within the Project vicinity. The USFWS responded on October 7, 2020, indicating that the Project crosses the Wayne National Forest and a federal authorization from the Forest Service may be required. During the siting process of the Project, it was determined that a federal authorization from the Forest Service was not required for the Project.



4.0 SUMMARY

This addendum includes wetland delineation and stream assessment results as well as habitat assessments of the newly proposed access road to the Ilesboro South Central Power transmission line (Addendum Project survey corridor) in Vinton, County Ohio. Identified wetlands and streams within the original wetland delineation and stream assessment report, Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project – *February 2021*, are included on the figures for reference. Data forms, photographs, and supporting information of the previously identified features are provided within the February 2021 – Report.

According to a response letter received from the USFWS on October 7, 2020, this Project is located within the range of the federally endangered Indiana bat and the federally threatened northern long-eared bat. With regard to state threatened and endangered species that may occur within the Project vicinity, 14 species were listed by ODNR. These species included: Indiana bat, northern long-eared bat, little brown bat, tricolored bat, little spectaclecase, northern brook lamprey, Ohio lamprey, spotted darter, Tippecanoe darter, timber rattlesnake, eastern hellbender, midland mud salamander, eastern spadefoot toad, and the northern harrier.

Based on general observations during the ecology survey, no potentially suitable habitat was identified in the Addendum Project survey corridor for the Indiana bat, northern long-eared bat, little brown bat, tricolored bat, little spectactlecase, northern brook lamprey, Ohio lamprey, spotted darter, Tippecanoe darter, timber rattlesnake, eastern hellbender, midland mud salamander, or the eastern spadefoot salamander. The results of the ecological survey conducted by AECOM on February 2, 2022 and provided in this Project addendum are limited to the areas within the Addendum Project survey corridor provided in Figure 3: Wetland Delineation and Stream Assessment Map. Areas that fall outside of the Project survey corridor were not evaluated in the field and are not included in the reporting of this survey.

Habitat in the area was suitable for the northern harrier as it was primarily composed of undulating grasses in a pasture field. ODNR-DOW recommends that construction should be avoided within the grassland habitat during the species' nesting period of May 15 to August 1. This type of habitat is present within the Addendum Project survey corridor as the old field that dominates the majority of the study area is primarily composed of grasses. During field surveys for the Addendum study area, AECOM ecologists observed a distant raptor foraging over the grassland habitat west of OH-98 near the Project area. Physical characteristics (gray head and dorsal surface, white ventral surface and rump) and behavior (low, consistent flight pattern punctuated by apparent predatory dives) of the raptor were consistent with the northern harrier. Although positive identification could not be made from great distance, this observation supports the likelihood of northern harriers to be present within or adjacent to the Project area.



The information contained in this 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.

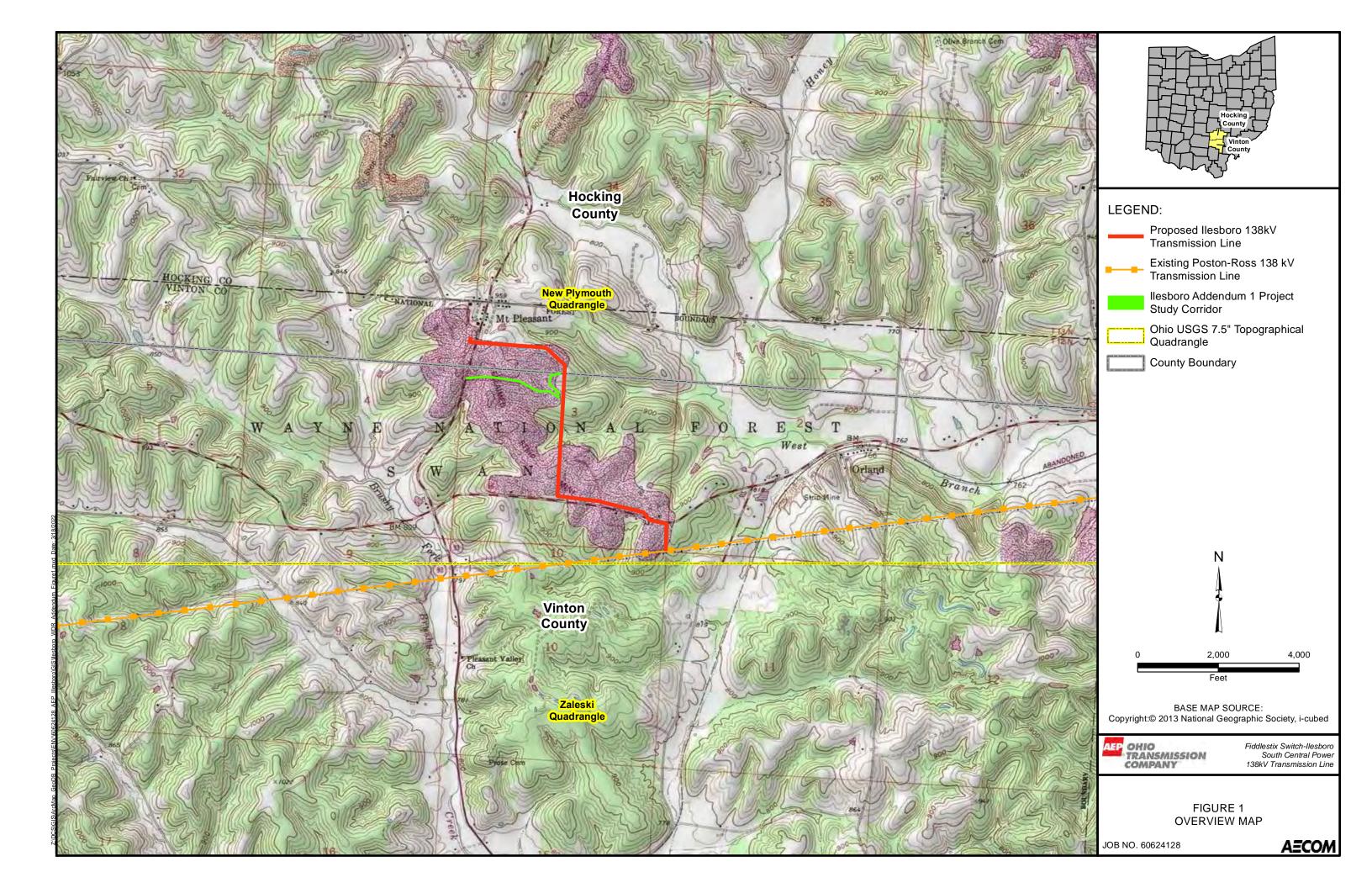
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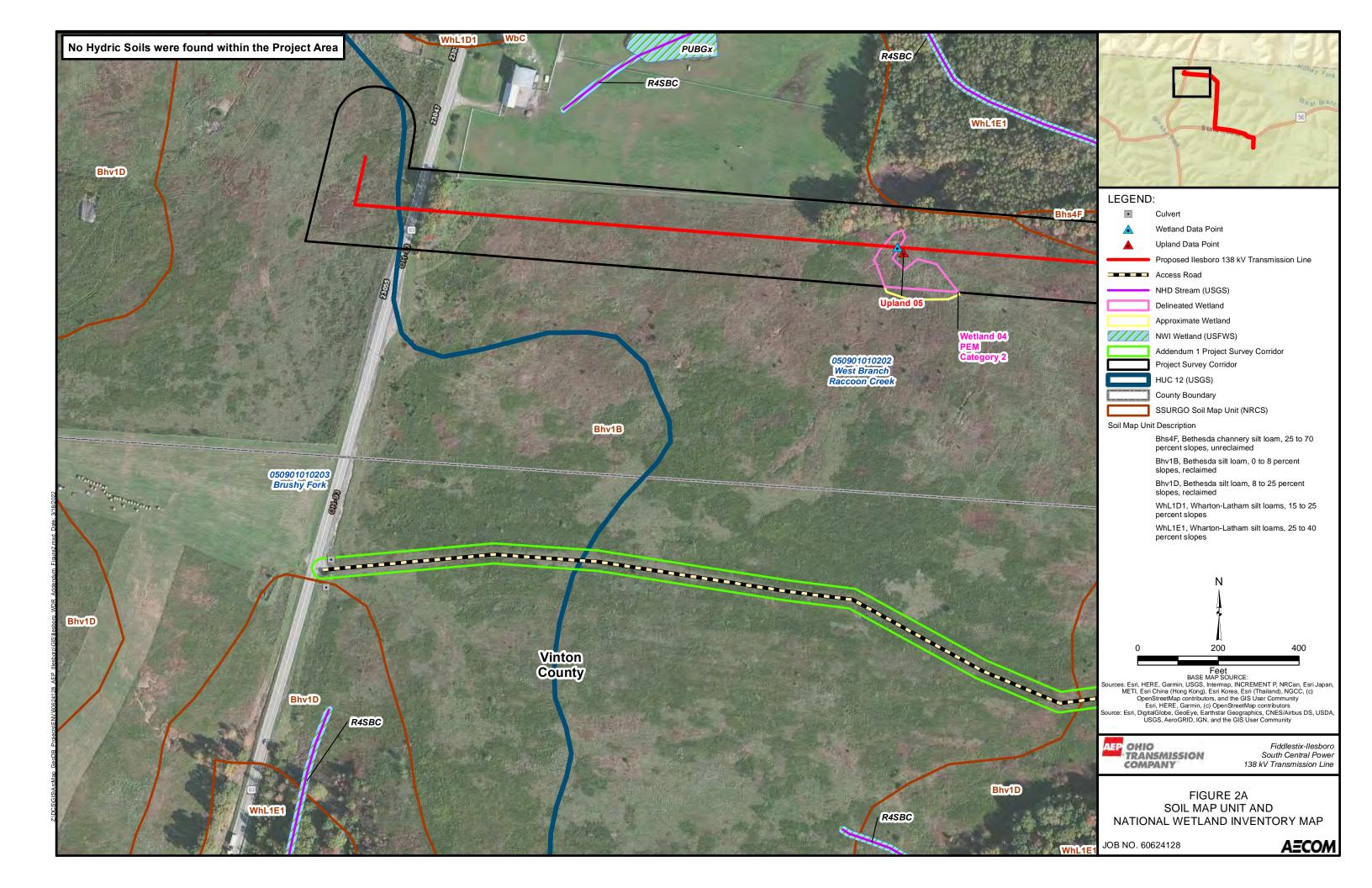
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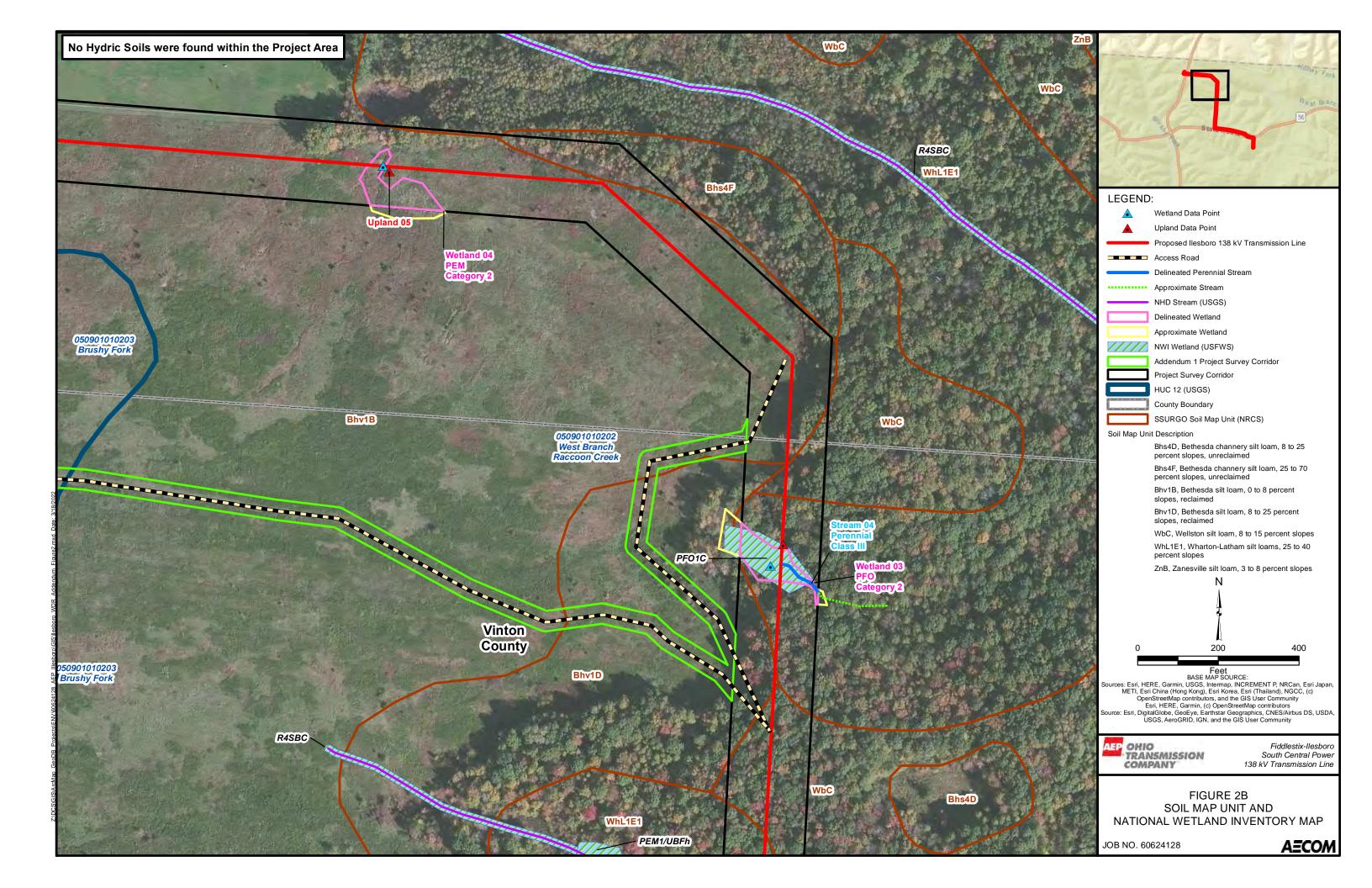
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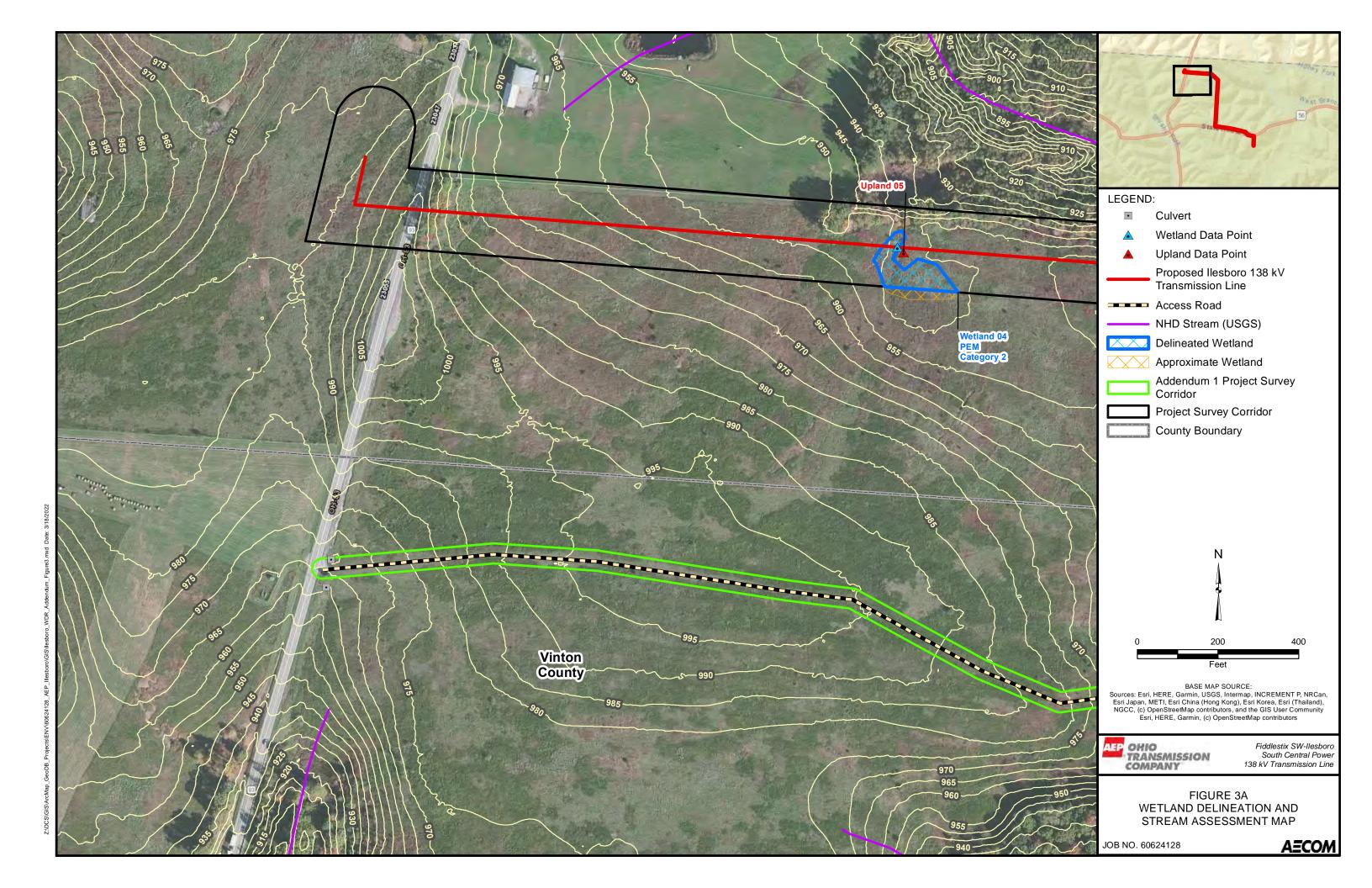


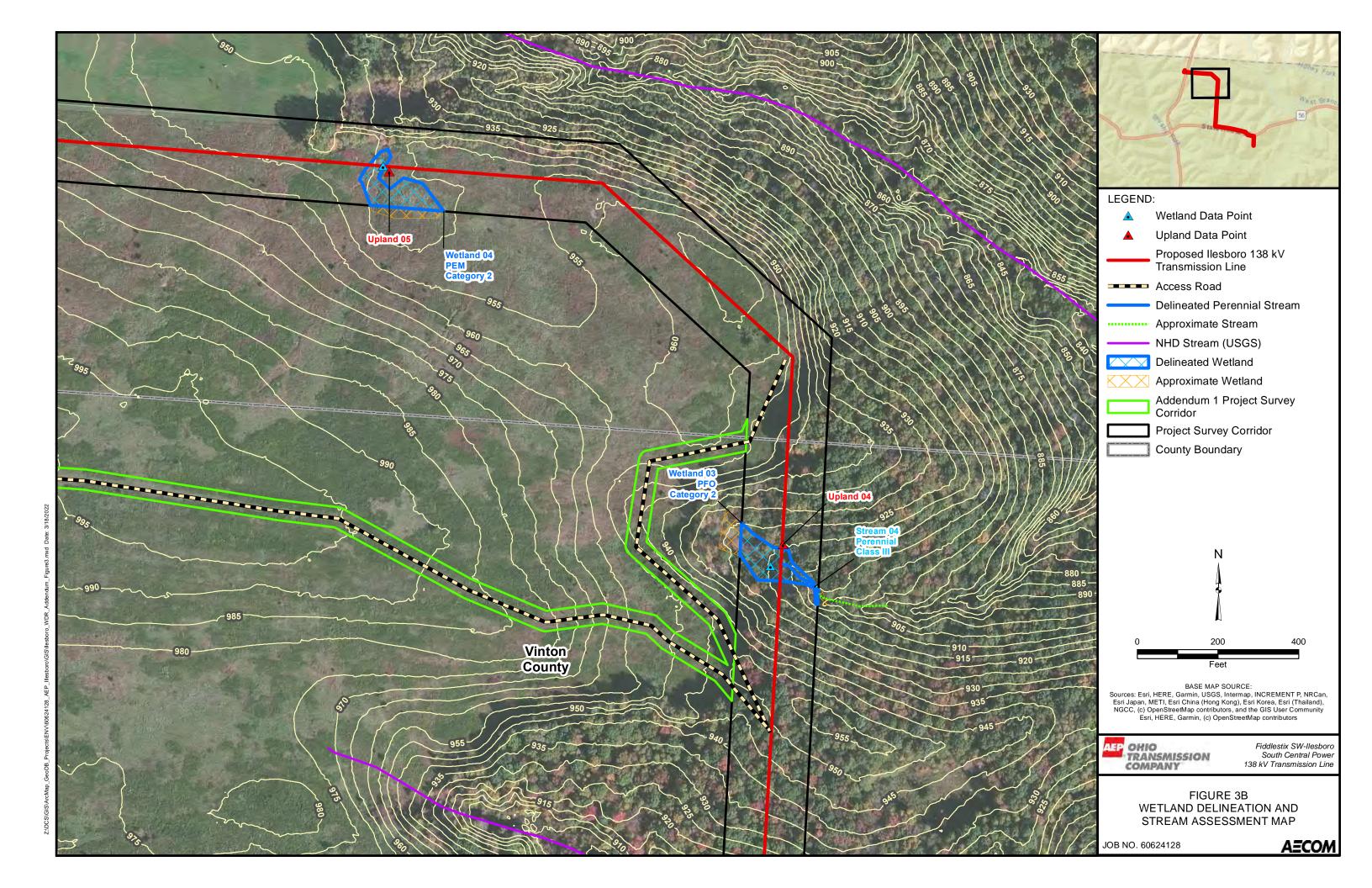
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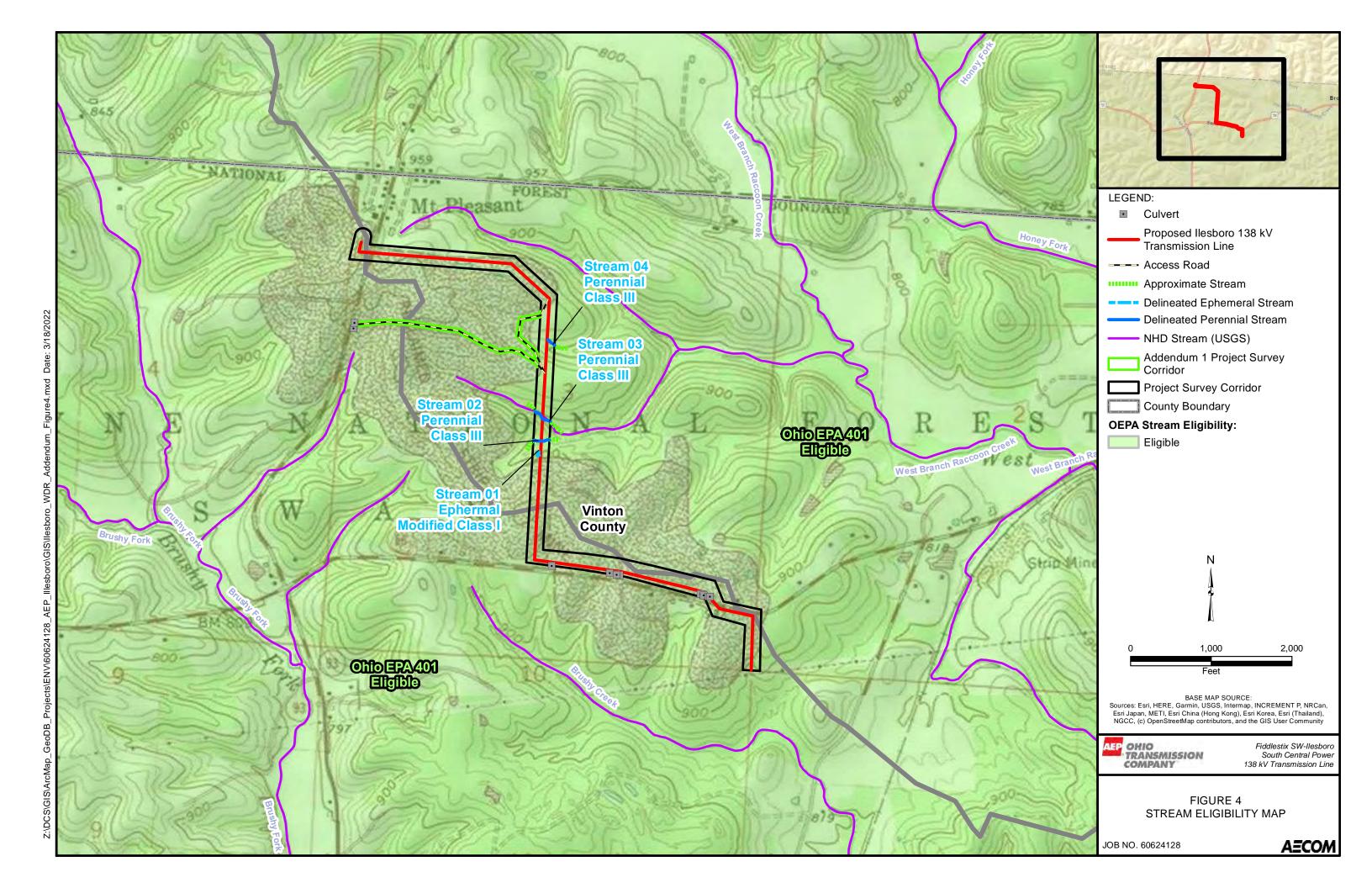


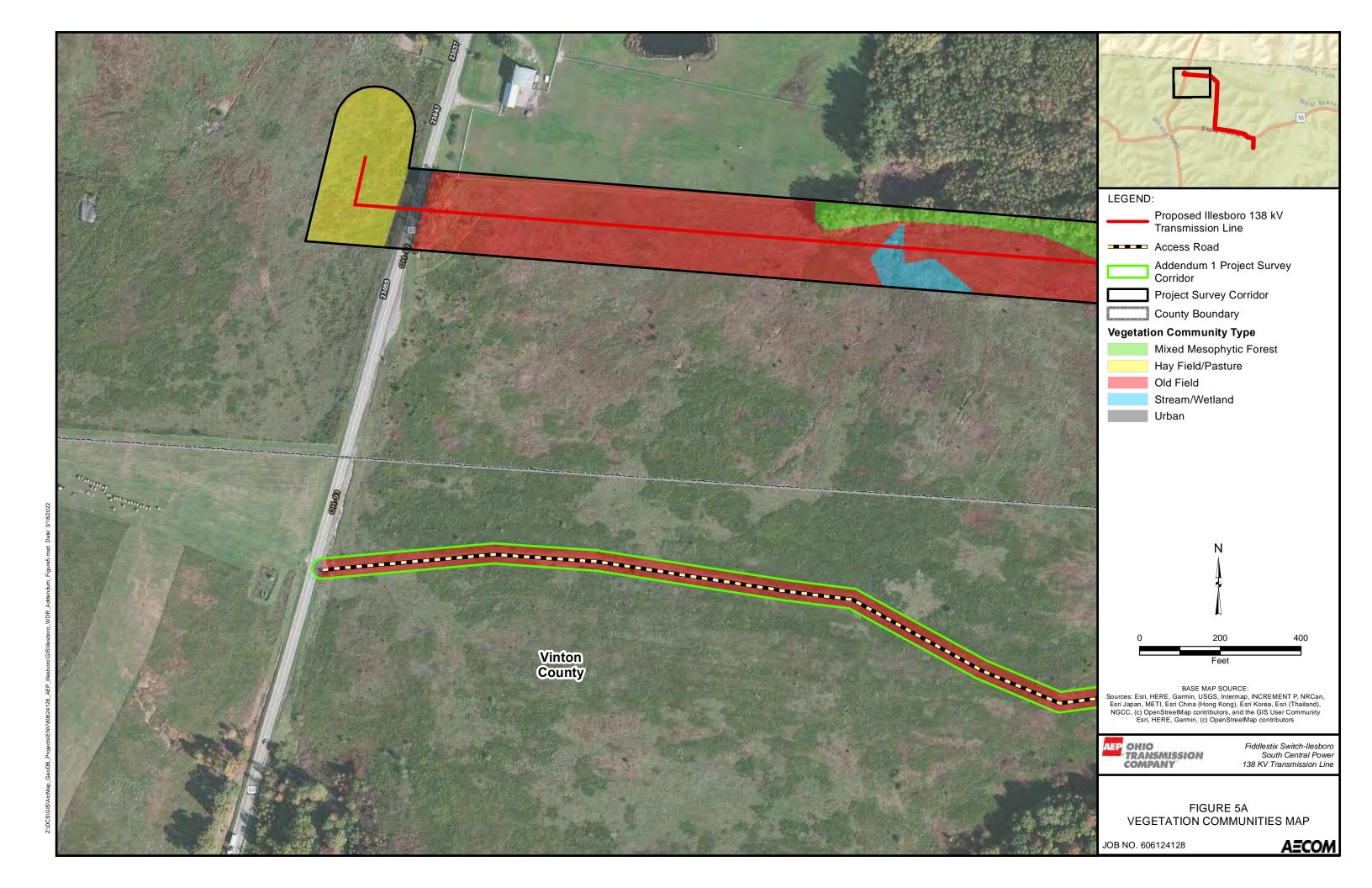


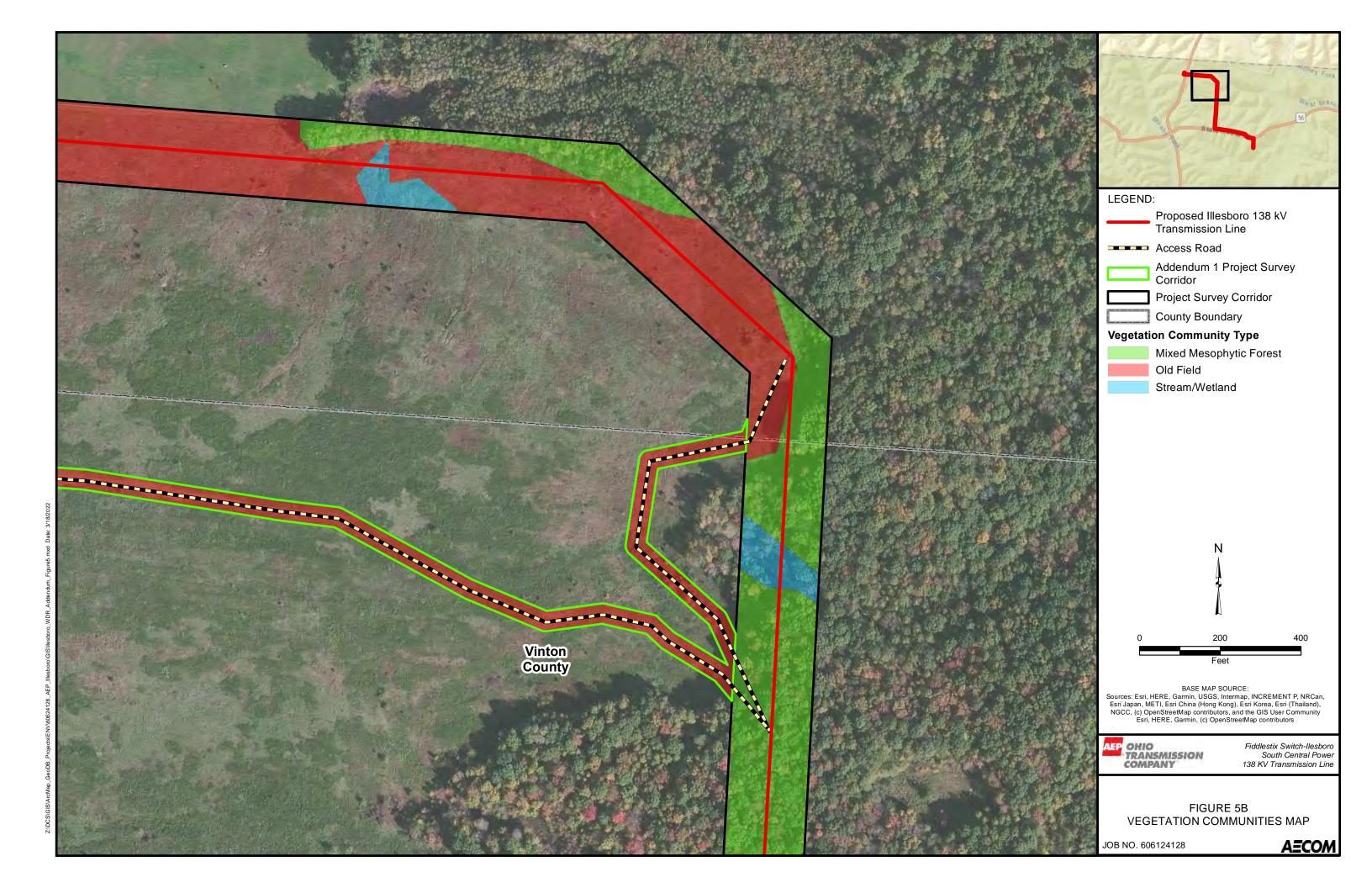














APPENDIX A

Habitat and Other Identified Features Photographs



PHOTOGRAPHIC RECORD HABITAT

Client Name:

AEP

Site Location:

Fiddlestix Switch – Ilesboro South Central Power 138kV Transmission Line Project

Project No. 60624128

Photo 1

Date:

February 2, 2022

Description:

Old field habitat within access road

Facing North



Photo 2

Date:

February 2, 2022

Description:

Urban area of public road and gravel west of access road

Facing West



FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138KV TRANSMISSION LINE PROJECT

ADDENDUM 2 – FINAL ALIGNMENT

VINTON COUNTY, OHIO

ADDENDUM WETLAND DELINEATION AND STREAM ASSESSMENT REPORT, ADDENDUM 2

Prepared for:

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



Prepared by:



525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Project #: 60624128

October 2022



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1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing to install approximately 1.5-miles of greenfield 138 kV transmission line in Vinton County, Ohio (Project). The greenfield route is to tie the new Ilesboro delivery point to the Lemaster-Ross 138kV circuit. Installation of a new three-way phase over phase 138 kV switch to serve the new Ilesboro 138 kV delivery point connected to the Lemaster-Ross 138 kV circuit is proposed. Approximately 0.01-mile of 138 kV line on the existing Poston-Ross 138 kV Transmission Line is also included in the Project. The proposed Project is illustrated on Figure 1.

The initial wetland delineation and stream assessment report, completed in February 2021, was revised in March 2022, titled as: *Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Project – Wetland Delineation and Stream Assessment Report – February 2021, Revised in March 2022* (AECOM, 2022a), herein referred to as the "Revised Report". The purpose of the report revision was to provide more accurate and updated stream and wetland classifications and categorizations since the vacatur of the EPA's 2020 Clean Water Act Section 401 Certification Rule (2020 Rule) on October 21, 2021.

In addition to the Revised Report, in March 2022, AEP Ohio Transco requested the survey of an additional 3.75-acres, comprising of additional work areas and a 50-foot-wide buffer along a potential access road to the proposed Ilesboro 138 kV Transmission Line, to facilitate the rebuild (Addendum 1 Project survey area, see Figure 1). The results of that effort are included within the *Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Project Addendum 1- Access Road- Addendum Wetland Delineation and Stream Assessment Report –March 2022* (AECOM, 2022b), herein referred to as the "Addendum 1 Report".

In September 2022, AEP Ohio Transco retained AECOM Technical Services, Inc. (AECOM) to conduct a survey of approximately 66.16-acres associated with a selected final alignment, as chosen through the Route Analysis process, in Vinton County, Ohio (herein referred to as the "Addendum 2 Project survey area"). The addendum 2 Project survey area includes approximately 0.17-mile of access to the Lemaster-Ross 138kV circuit and approximately 1.16-mile-long section of existing transmission line known as the Lemaster-Ross 138 kV circuit (Figure 2). The results of the field efforts are included within this report.

The identified features that were originally provided in the March 2022 Revised and March 2022 Addendum 1 Reports are not referenced in this report. None of the originally identified features fall within the current Addendum 2 Project survey area. Previously identified features, data forms, photographs, and supporting information of the previous field efforts of the Project are contained within the March 2022 Revised Report and/or March 2022 Addendum 1 Report.



This addendum 2 ecological report includes the results (data forms, photographs, and updated figures) associated with wetlands and/or streams identified only within the Addendum 2 Project survey area (Figure 1).

2.0 METHODOLOGY

A comprehensive methodology of the field surveys and data reviews completed for this report are included in the March 2022 Revised Report. 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: Eastern Mountains and Piedmont Region* (Version 2.0) (EMP Regional Supplement) (USACE, 2012). In addition, delineated wetlands were classified using the Ohio Environmental Protection Agency (OEPA) Ohio Rapid Assessment Method for Wetlands v. 5.0 (ORAM; Mack, 2001). 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 OEPA's Field Methods for Evaluating Primary Headwater Streams in Ohio (OEPA, 2020).

AECOM submitted a request to Ohio Department of Natural Resources (ODNR) Office of Real Estate – Environmental Review Section, as well as the United States Fish and Wildlife Service (USFWS) in August 2022 soliciting comments on the proposed Project. Agency-identified species of concern and available species-specific information was reviewed to identify the various habitat types that listed species are known to inhabit.

3.0 RESULTS

AECOM ecologists surveyed the Addendum 2 Project survey area from September 1st - 2nd, 2022 to conduct a wetland delineation, stream assessment and habitat survey. During the field survey, ten (10) wetlands and ten (10) streams were identified within the Addendum 2 Project survey area. The delineated features are discussed in detail in the following sections.

3.1 WETLAND DELINEATION

3.1.1 PRELIMINARY SOILS EVALUATION

Soils in delineated wetlands were observed and documented as part of the delineation methodology. According to the USDA/NRCS Web Soil Survey (USDA NRCS SSURGO, 2019), eight (8) soil map units are mapped within the Addendum 2 Project survey area (Figure 2). Of these soil map units, none are



characterized as hydric. Table 1 below provides a detailed overview of all soil series and soil map units within the Addendum 2 Project survey corridor. Soil map units located are shown on Figure 2.

TABLE 1: SOIL MAP UNITS AND DESCRIPTION WITHIN THE ADDENDUM 2 PROJECT SURVEY AREA

Soil Series	Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Bethesda .	Bhs4F	Bethesda channery silt loam, 25 to 70 percent slopes, unreclaimed	Ridges	No	0
	Bhv1B	Bethesda silt loam, 0 to 8 percent slopes, reclaimed	Ridges	No	0
Omulga	Omu1C1	Omulga silt loam, 6 to 12 percent slopes	Terraces	No	0
Sewell	SbE	Sewell channery fine sandy loam, 20 to 40 percent slopes	Hills	No	0
Wellston	WbC	Wellston silt loam, 8 to 15 percent slopes	Ridges	No	0
Wharton- Latham	WhL1D1	Wharton-Latham silt loams, 15 to 25 percent slopes	Hills	No	0
	WhL1E1	Wharton-Latham silt loams, 25 to 40 percent slopes	Hills	No	0
Wyatt	Wya1b1	Wyatt silt loam, 2 to 6 percent slopes	Terraces	No	0

USDA, NRCS. Soil Survey Geographic (SSURGO) Database. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed September 21, 2022.

3.1.2 NATIONAL WETLAND INVENTORY MAP REVIEW

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

According to the National Wetland Inventory (NWI) data, the Addendum 2 Project survey area contains four (4) mapped NWI wetlands (USFWS, 2022). These NWI wetlands are described below in Table 2 and the locations of mapped NWI wetlands present within the Addendum 2 Project survey area and surrounding area are illustrated on Figure 2.

TABLE 2: NWI DISPOSITION SUMMARY TABLE WITHIN THE ADDENDUM 2 PROJECT SURVEY AREA

NWI Code	Number of NWI Feature	NWI Description	Figure Reference	Related Field Inventoried Resource	Comments
R4SBC	present 1	Riverine, Intermittent, Stream Bed, Seasonally Flooded	2A, 2C	(Wetland ID/Stream ID) Brushy Creek (S-WRL-003 and S-WRL-008)	Stream extends outside Addendum 2 Project survey area
PEM1C	1	Palustrine, Emergent, Persistent, Seasonally Flooded	2B	W-WRL-007 (PUB/PSS Complex)	Fully delineated within the Addendum 2 Project survey area
PUBGx	2	Palustrine, Unconsolidated bottom, Intermittently exposed, Excavated	2D	W-WRL-009 and W-WRL-010	Wetlands both extend outside the Addendum 2 Project survey area

3.1.3 DELINEATED WETLANDS

During the September 2022 field surveys, AECOM identified ten (10) wetlands within the Addendum Project 2 survey area. Three (3) of the delineated wetlands (W-WRL-001, W-WRL-002, and W-WRL-003) were provisionally determined to be isolated. A table summarizing identified wetlands, wetland data forms (USACE and OEPA) and photographs are provided in Appendix A and B. Additional information on previously identified wetlands, including data forms and photographs, is provided within the March 2022 Revised Report and March 2022 Addendum 1 Report.

3.2 STREAM DELINEATION

During the September 2022 field survey, AECOM identified ten (10) streams in the Addendum 2 Project survey area. A table summarizing identified streams, EPA stream data forms and photographs are provided in Appendix C and D. Data forms and additional information for previously identified streams is provided within the March 2022 Revised Report and March 2022 Addendum 1 Report.

3.3 OEPA STREAM ELIGIBILITY

The Addendum 2 Project survey area is located in the West Branch Racoon Creek and Brushy Fork watersheds (HUC 12: 050901010202 & 050901010203; Figure 4) which are considered "Eligible" by OEPA (OEPA, 2017b). Therefore, this Project may be eligible for General 401 Water Quality Certification of the 404 Nationwide Permits if all conditions and limitations are met.

3.4 PONDS

No ponds were delineated within the Addendum 2 Project survey area.

3.5 FEMA 100-YEAR FLOODPLAINS

No regulated FEMA 100-year floodplains and/or floodways are located within the Addendum 2 Project survey area.



3.6 UPLAND DRAINAGE FEATURES WITHIN THE PROJECT SURVEY AREA

Fifteen (15) upland drainage features (UDF) were identified within the Addendum 2 Project survey area. Based on site investigation, the UDFs lacked characteristics of jurisdictional WOTUS, as defined by USACE (USACE, 2005). Photographs of the upland drainage features are provided in Appendix D.

3.7 VEGETATIVE COMMUNITIES WITHIN THE PROJECT SURVEY AREA

In conjunction with the stream and wetland field surveys in September 2022, AECOM ecologists conducted a general habitat survey. The Addendum 2 Project survey area was identified as predominately mixed mesophytic forest and scrub-shrub habitat. Vegetative community descriptions and approximate acreages within the Addendum 2 Project survey area are provided below in Table 3 and illustrated on Figure 5. Representative photographs of the vegetative communities are provided in Appendix E.

TABLE 3: VEGETATIVE COMMUNITIES WITHIN THE ADDENDUM 2 PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage Within the Project Survey Area	Approximate Percentage Within the Project Survey Area
Forest	Mixed mesophytic forests are present along the Project survey area and within the proposed ROW. Woody species dominating these areas ranged between 3-8" DBH and included swamp white oak (<i>Quercus bicolor</i>), red maple (<i>Acer rubrum</i>), tuliptree (<i>Liriodendron tulipifera</i>) and American beech (<i>Fagus grandifolia</i>). The dominant shrub-layer species included multiflora rose (<i>Rosa multiflora</i>) and northern spicebush (<i>Lindera benzoin</i>).	14.0	36
Scrub-Shrub	Scrub-shrub habitats represent the successional stage between old-field and second growth forest, and often emerge in recently harvested forests responding to the lightness of the remaining canopy. Dominant species consist of herbaceous communities similar to that of old field habitat with a few woody species, to a community dominated by forest herbs and woody species.	11.0	28
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the Addendum 2 Project survey area in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old field areas within the Addendum 2 Project survey area and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs. Dominant species include Canada goldenrod (Solidago canadensis), timothy (Phleum pratense), orchardgrass (Dactylis glomerata), and giant ironweed (Vernonia gigantea).	8.8	22



Vegetative Community	Description	Approximate Acreage Within the Project Survey Area	Approximate Percentage Within the Project Survey Area
Stream/Wetland	Streams and wetlands were observed both within and beyond the Addendum 2 Project survey area.	2.4	6
Grassland	A grassland field was observed in the northern portion of the Addendum 2 Project survey area. This area is within the proposed ROW and consists of seldomly disturbed upland grasses and low-lying forbs such as little bluestem (Schizachyrium scoparium), broomsedge (Andropogon virginicus), yellow foxtail (Setaria pumila), red clover (Trifolium pratense), wild carrot (Daucus carota), and goldenrod (Solidago altissima).	1.8	4.5
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.	0.8	2
Hay Field/Pasture	Hay field was observed in very eastern portion of the Addendum 2 Project survey area. This area is within the existing ROW and consists of seasonally mowed areas of grass and forbs.	0.4	1
Residential	Landscaped areas, including residential properties and commercial properties, were observed within the Project vicinity. These landscaped areas within the Project survey area and adjacent areas are frequently mowed grasses and forbs.	0.2	0.5
	Totals:	39.3	100%

3.8 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation -

AECOM conducted a survey for potential rare, threatened, and endangered species habitat within the Addendum 2 Project survey area. A summary of the agency coordination responses is provided below. Correspondence letters from the USFWS and ODNR are included as Appendix F.



TABLE 4: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM 2 PROJECT SURVEY AREA

		IADI	LE 4: ODNR AND USFWS LIST	ED SPECIES WITHIN	I NE ADDENI	DUM 2 PROJECT SURVEY AREA	
Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts and Avoidance Dates
				Mammals			
Indiana bat (<i>Myotis sodalis</i>)	Endangered	Endangered	Winter Indiana bat hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (<i>Carya</i> spp.), oak (<i>Quercus</i> spp.), ash (<i>Fraxinus</i> spp.), birch (<i>Betula</i> spp.), and elm (<i>Ulmus</i> spp.) have been found to be utilized by the Indiana bat. These tree species and many others may be used when dead if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low-density subcanopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey.	Yes- Within the Addendum 2 Project survey area, wooded areas were identified, which present potentially suitable summer roosting habitat. Two (2) abandoned underground mine openings and several historic and inactive surface mines, which could potentially serve as winter hibernacula, were identified within 0.25 mile of the Addendum 2 Project Survey Area.	Summer Tree Clearing April 1 – September 30	odnr-dow stated that the Project is located within the Indiana bat's range. Therefore, odnr-down recommends that if tree clearing is unavoidable, removal of trees only occurs from October 1 through March 31 and conserves trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If adherence to the seasonal tree clearing window is not feasible, Odnr recommends a mist net survey or acoustic survey be conducted from June 1 to August 15, prior to any cutting. Limited summer tree cutting may be acceptable after consultation with DOW. If a desktop habitat assessment identifies a potential hibernaculum present within 0.25-mile of the Project area, further coordination with Odnr-DOW may be required. USFWS commented that the Indiana bat occurs throughout the State of Ohio and removal of trees ≥3 inches dbh is recommended to be avoided wherever possible. USFWS commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31 to avoid impacts to Indiana bats. If seasonal tree clearing is not possible, then a summer presence/absence survey, conducted only between June 1 and August 15, may be conducted by an approved surveyor with a valid federal permit. Summer presence/absence surveys must be coordinated with the Ohio USFWS field office.	Potentially suitable summer habitat (Mixed Mesophytic Forest) and potential winter hibernacula were identified within 0.25-mile of the Addendum 2 Project Survey Area. If a potential or known hibernaculum is identified, ONDR-DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance; however, limited summer/winter tree cutting may be acceptable after coordination with ODNR-DOW.



TABLE 4: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM 2 PROJECT SURVEY AREA

		IAB	LE 4: ODNR AND USFWS LIST	ED SPECIES WITHIN	THE ADDEN	DUM 2 PROJECT SURVEY AREA	
Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts and Avoidance Dates
Northern long- eared bat (<i>Myotis</i> septentrionalis)	Threatened	Threatened	Winter hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (<i>Carya</i> spp.), oak (<i>Quercus</i> spp.), ash (<i>Fraxinus</i> spp.), birch (<i>Betula</i> spp.), and elm (<i>Ulmus</i> spp.) have been found to be utilized by this species. These tree species and many others may be used when dead if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loosebarked trees with 60 to 80 percent canopy closure and a low-density sub-canopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey. Proximity to water is critical because insect prey density is greater over or near open water. This species has also been found, albeit rarely, roosting in structures like barns and sheds.	Yes- Within the Addendum 2 Project survey area, wooded areas were identified, which present potentially suitable summer roosting habitat. Two (2) abandoned underground mine openings and several historic and inactive surface mines, which could potentially serve as winter hibernacula, were identified within 0.25 mile of the Addendum 2 Project Survey Area.	Summer Tree Clearing April 1 – September 30	ODNR-DOW stated that the Project is located within the Northern long-eared bat's range. Therefore, ODNR-DOW recommends that if tree clearing is unavoidable, removal of trees only occurs from October 1 through March 31 and conserves trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If adherence to the seasonal tree clearing window is not feasible, ODNR recommends a mist net survey or acoustic survey be conducted from June 1 to August 15, prior to any cutting. Limited summer tree cutting may be acceptable after consultation with DOW. If a desktop habitat assessment identifies a potential hibernaculum present within 0.25-mile of the Project area, further coordination with ODNR-DOW may be required. USFWS commented that the Northern long-eared bat occurs throughout the State of Ohio and removal of trees ≥3 inches dbh is recommended to be avoided wherever possible. USFWS commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.	Potentially suitable summer habitat (Mixed Mesophytic Forest) and potential winter hibernacula were identified within 0.25-mile of the Addendum 2 Project Survey Area. If a potential or known hibernaculum is identified, ONDR-DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance; however, limited summer/winter tree cutting may be acceptable after coordination with ODNR-DOW.



TABLE 4: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM 2 PROJECT SURVEY AREA

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts and Avoidance Dates
Little brown bat (Myotis lucifugus)	Endangered	Threatened	Little brown bats are habitat generalists, using most cover types available to them in a variety of ecosystems. Much of their foraging activity is associated with aquatic habitats, so lakes and streams play a significant factor in habitat use.	Yes- Within the Addendum 2 Project survey area, wooded areas were identified, which present potentially suitable summer roosting habitat. Two (2) abandoned underground mine openings and several historic and inactive surface mines, which could potentially serve as winter hibernacula, were identified within 0.25 mile of the Addendum 2 Project Survey Area.	Summer Tree Clearing April 1 – September 30	ODNR-DOW stated that the Project is located within the Little brown bat's range. Therefore, ODNR-DOW recommends that if tree clearing is unavoidable, removal of trees only occurs from October 1 through March 31 and conserves trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If adherence to the seasonal tree clearing window is not feasible, ODNR recommends a mist net survey or acoustic survey be conducted from June 1 to August 15, prior to any cutting. Limited summer tree cutting may be acceptable after consultation with DOW. If a desktop habitat assessment identifies a potential hibernaculum present within 0.25-mile of the Project area, further coordination with ODNR-DOW may be required.	Potentially suitable summer habitat (Mixed Mesophytic Forest) and potential winter hibernacula were identified within 0.25-mile of the Addendum 2 Project Survey Area. If a potential or known hibernaculum is identified, ONDR-DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance; however, limited summer/winter tree cutting may be acceptable after coordination with ODNR-DOW.



TABLE 4: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM 2 PROJECT SURVEY AREA

		IAD	LE 4. ODNK AND USFWS LIST	ED SPECIES WITHIN	THE ADDENDUM 2 PROJECT SURVEY AREA			
Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts and Avoidance Dates	
Tricolored bat (Perimyotis subflavus)	Endangered	None	Tricolored bats are associated with forested landscapes, often in open woods. They can also be found over water and adjacent water edges. Tricolored bats commonly among the leaves or needles of live or dead trees but will also use buildings. The bats hibernate in caves, mines, and rock outcroppings.	Yes- Within the Addendum 2 Project survey area, wooded areas were identified, which present potentially suitable summer roosting habitat. Two (2) abandoned underground mine openings and several historic and inactive surface mines, which could potentially serve as winter hibernacula, were identified within 0.25 mile of the Addendum 2 Project Survey Area.	Summer Tree Clearing April 1 – September 30	ODNR-DOW stated that the Project is located within the Tricolored bat's range. Therefore, ODNR-DOW recommends that if tree clearing is unavoidable, removal of trees only occurs from October 1 through March 31 and conserves trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If adherence to the seasonal tree clearing window is not feasible, ODNR recommends a mist net survey or acoustic survey be conducted from June 1 to August 15, prior to any cutting. Limited summer tree cutting may be acceptable after consultation with DOW. If a desktop habitat assessment identifies a potential hibernaculum present within 0.25-mile of the Project area, further coordination with ODNR-DOW may be required.	Potentially suitable habitat (woodlands) was observed within the Project survey corridor. If tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31. If a potential or known hibernaculum is identified, ONDR-DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance; however, limited summer/winter tree cutting may be acceptable after coordination with ODNR-DOW.	
				Reptiles				
Timber rattlesnake (<i>Crotalus</i> <i>horridus</i>)	Endangered	Species of Concern	In addition to wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering.	No- Within the Addendum 2 Survey area, no potentially suitable habitat was observed for this species.	N/A	ODNR-DOW indicated that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species. USFWS did not comment on this species.	ODNR DOW determined that this project is not likely to impact this species.	
				Fish				
Northern brook lamprey (Ichthyomyzon fassor)	Endangered	None	The northern brook lamprey inhabits clean headwater areas of creeks and small rivers with coarse gravel to rock bottoms located in once glaciated terrain.	Yes. Bushy Creek (S-WRL-003 and S-WRL-008), a perennial stream, is present with the Addendum 2 Project Survey Area.	No in-water work in perennial streams from March 15 through June 30	ODNR-DOW recommends no in-water work in perennial streams from March 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, the Project is not likely to impact the species. USFWS did not comment on this species.	No in-water work is proposed for the Project.	



TABLE 4: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM 2 PROJECT SURVEY AREA

		IAD	LE 4: ODNK AND USFWS LIST	ED SPECIES WITHIN	I DE ADDENI	DUM 2 PROJECT SURVEY AREA	
Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts and Avoidance Dates
Ohio lamprey (<i>lchthyomyzon</i> bdellium)	Endangered	None	The Ohio lamprey inhabits warmwater habitats in the Ohio River basin, including the Allegheny, Wabash, and Upper Tennessee drainages. Depending on the life cycle period, this species either inhabits slow areas with soft substrates and high detrital content, medium to large river systems, or runs and riffles of clean gravel/cobble in smaller streams and rivers.	Yes. Bushy Creek (S- WRL-003 and S- WRL-008), a perennial stream, is present with the Addendum 2 Project Survey Area.	No in-water work in perennial streams from March 15 through June 30	ODNR-DOW recommends no in-water work in perennial streams from March 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, the Project is not likely to impact the species. USFWS did not comment on this species.	No in-water work is proposed for the Project.
Spotted darter (Etheostoma maculatum)	Endangered	None	This species requires large unpolluted streams, spending most of its time in deep riffles, or pools just downstream, where a gravel-rubble bottom predominates, and bottom current velocity is low.	Yes. Bushy Creek (S- WRL-003 and S- WRL-008), a perennial stream, is present with the Addendum 2 Project Survey Area.	No in-water work in perennial streams from March 15 through June 30	ODNR-DOW recommends no in-water work in perennial streams from March 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, the Project is not likely to impact the species. USFWS did not comment on this species.	No in-water work is proposed for the Project.
				Bivalves			
Little spectaclecase (Villosa lienosa)	Endangered	None	This species lives in sandy substrates in slight to moderate current. The mussel prefers mud and typically inhabits small creeks to medium-sized rivers with perennial flow regimes, usually along the banks in slower currents.	Yes. Bushy Creek (S- WRL-003 and S- WRL-008), a perennial stream, is present with the Addendum 2 Project Survey Area.	N/A	ODNR-DOW comments that due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species. USFWS did not comment on this species.	No in-water work is proposed for the Project.
				Amphibians			
Eastern hellbender (<i>Cryptobranchu</i> s alleganiensis)	Endangered	Species of Concern	The eastern hellbender's habitat consists of shallow, fast-flowing rocky streams. They are generally found in areas with large, intermittent, irregularly shaped rocks, within swift water. They tend to stay away from slow-moving water and muddy banks with slab rock bottoms.	Yes. Bushy Creek (S- WRL-003 and S- WRL-008), a perennial stream, is present with the Addendum 2 Project Survey Area.	N/A	ODNR-DOW commented that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species. USFWS did not comment on this species.	No in-water work is proposed for the Project.



TABLE 4: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM 2 PROJECT SURVEY AREA

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts and Avoidance Dates
Midland mud salamander (Pseudotriton montanus diastictus)	Threatened	None	This species inhabits muddy and silty areas along swamps, seeps, bogs, springs, floodplain forests, and headwater streams. Sightings of this species are rare, as the salamanders live underground in burrows.	Yes. Bushy Creek (S- WRL-003 and S- WRL-008), a perennial stream, is present with the Addendum 2 Project Survey Area.	N/A	ODNR-DOW commented that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species. USFWS did not comment on this species.	ODNR determined that this project is not likely to impact this species.
Eastern spadefoot toad (Scaphiopus holbrooki)	Endangered	None	This species if found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions.	No- Within the Addendum 2 Project survey area, no potentially suitable habitat was observed for this species.	N/A	ODNR-DOW commented that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact this species. USFWS did not comment on this species.	ODNR determined that this project is not likely to impact this species.

ODNR Coordination – Coordination with the ODNR was initiated during the planning stages of the Project to obtain records of protected species located in the vicinity of the Project. On September 30, 2022, the ODNR Office of Real Estate Environmental Review Section replied to an emailed request for records of protected species within an extended area around the Addendum 2 Project Survey Area. The Ohio Natural Heritage Database (ONHD) did not return records of state endangered or threatened plant or animal species within a one-mile radius of the Project area. Additionally, the ONHD did not return records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species.

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

The ODNR DOW also stated that due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact the little spectaclecase, the timber rattlesnake, the eastern hellbender, the midland mud salamander, or the eastern spadefoot toad. Impacts to these species are not anticipated as a result of the Project.

ODNR-DOW recommends 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. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance; however, limited summer or winter tree cutting may be acceptable after consultation with DOW. In addition to conducting a general habitat survey in September 2022, AECOM performed a limited desktop habitat assessment to determine potential hibernaculum(a) within the Addendum 2 Project survey area. Two underground mines were identified within 0.25-mile of the Project corridor, therefore further coordination with ODNR-DOW may be required. The desktop habitat assessment can be found within Appendix F.

USFWS Coordination – Coordination with the USFWS was also initiated during the planning stages of the Project to obtain technical assistance in regard to federally listed species that may occur within the Project vicinity. The USFWS responded on September 21, 2022, noting that the due to the project, type, size, and location, we do not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.

4.0 SUMMARY

This addendum 2 includes wetland delineation and stream assessment results, as well as habitat assessments, of the proposed selected final alignment (Addendum 2 Project survey area) in Vinton, County Ohio. Identified wetlands and streams within the original wetland delineation and stream assessment report, Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Rebuild Project – February 2021,



Revised March 2022 (AECOM, 2022a) and the Fiddlestix Switch-Ilesboro South Central Power 138 kV Transmission Line Project Addendum 1- Access Road- Addendum Wetland Delineation and Stream Assessment Report – March 2022 (AECOM, 2022b) are included not included within this report. Data forms, photographs, and supporting information of the previously identified features are provided within the previous reports.

The ecological survey of the Addendum 2 Project survey area identified a total of ten (10) wetlands and ten (10) streams. The wetlands within the Addendum 2 Project survey area includes:

- one (1) PEM wetland,
- one (1) PSS/PUB complex,
- four (4) PUB wetlands, and
- four (4) PFO wetlands.

All wetlands were identified as Category 2 wetlands. Seven of the ten wetlands (W-WRL-004, W-WRL-005, W-WRL-006, W-WRL-007, W-WRL-008, W-WRL-009, and W-WRL-010) have been provisionally classified as jurisdictional WOTUS; remaining three are provisionally isolated.

Streams within the Addendum 2 Project survey area include:

- two (2) ephemeral, both identified as Class I PHW streams,
- six (6) intermittent; five (5) classified as Class II PHW stream and one (1) (S-WRL-007) classified as a Class III PHW stream, and
- two (2) perennial streams (S-WRL-003 and S-WRL-008), both classified as Class III PHW streams.

AECOM has preliminary determined that the assessed streams within the Project survey area appear to be jurisdictional (i.e., WOTUS).

The reported results of the ecological survey conducted by AECOM on this Project are limited to the areas within the Project survey area provided in Figure 3. Areas that fall outside of the Project survey area were not evaluated in the field and are not included in the reporting of this survey.

According to a response letter received from the USFWS on October 7, 2020, this Project is located within the range of the federally endangered Indiana bat and the federally threatened northern long-eared bat. With regard to state threatened and endangered species that may occur within the Project vicinity, 12 species were listed by ODNR. These species included: Indiana bat, northern long-eared bat, little brown bat, tricolored bat, little spectaclecase, northern brook lamprey, Ohio lamprey, spotted darter, timber rattlesnake, eastern hellbender, midland mud salamander, and eastern spadefoot toad.



Based on general observations during the ecology survey and initial coordination with USFWS and ODNR, no potential impacts to the little spectactlecase, northern brook lamprey, Ohio lamprey, spotted darter, Tippecanoe darter, timber rattlesnake, eastern hellbender, midland mud salamander, or the eastern spadefoot toad are anticipated. Further coordination with ODNR-DOW regarding the identified potential winter hibernaculum for Indiana bat, northern long-eared bat, little brown bat, and tricolored bat may be required.

The results of the ecological survey conducted by AECOM on September 1st-2nd, 2022 and provided in this Project addendum are limited to the areas within the Addendum 2 Project survey area provided in Figure 3: Wetland Delineation and Stream Assessment Map. Areas that fall outside of the Addendum 2 Project survey corridor were not evaluated in the field and are not included in the reporting of this survey.

The information contained in this 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.

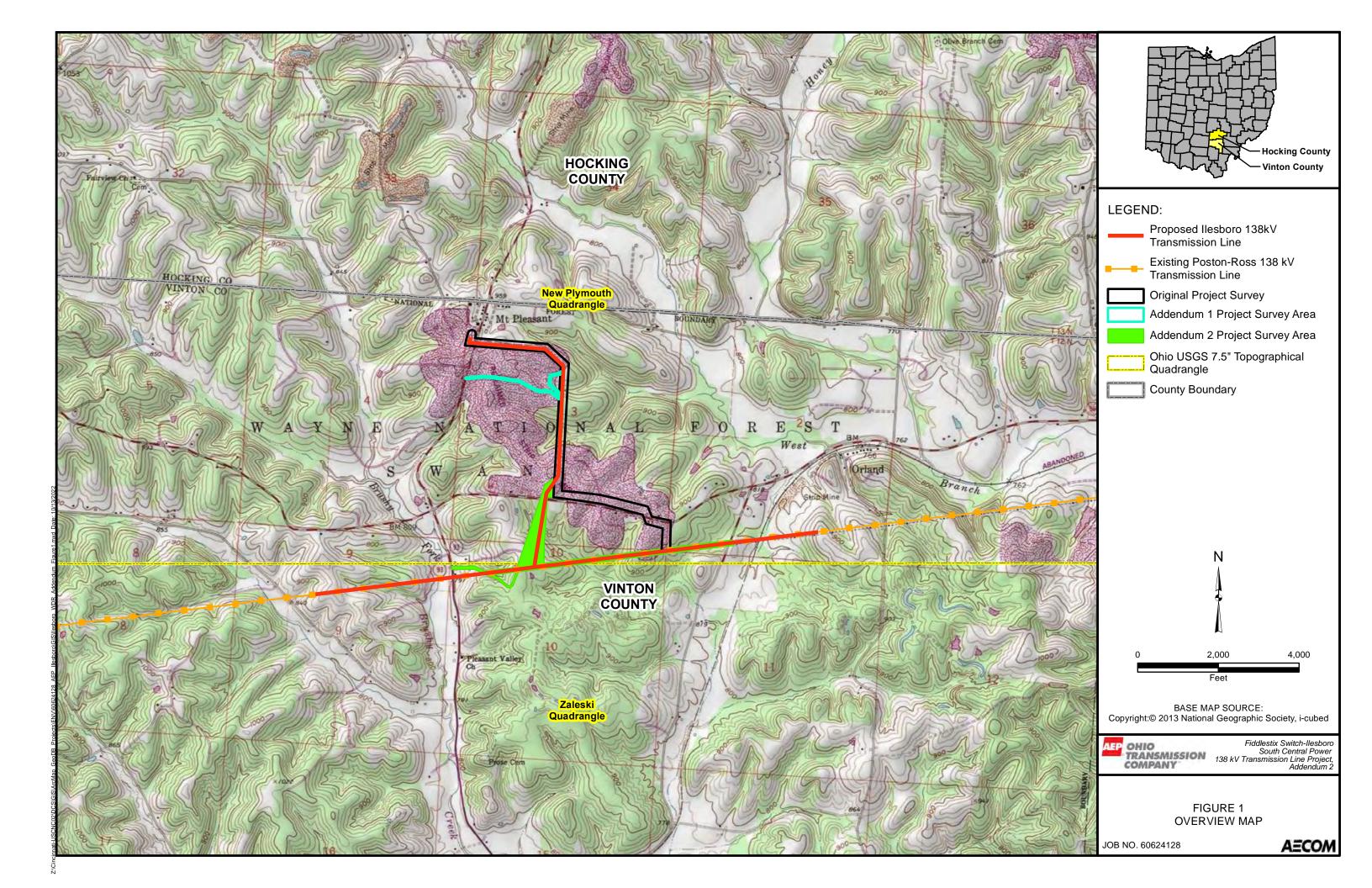
The field survey results presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which AECOM is unaware and has not had the opportunity to review. Changes in the condition of a property may occur with time due 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.

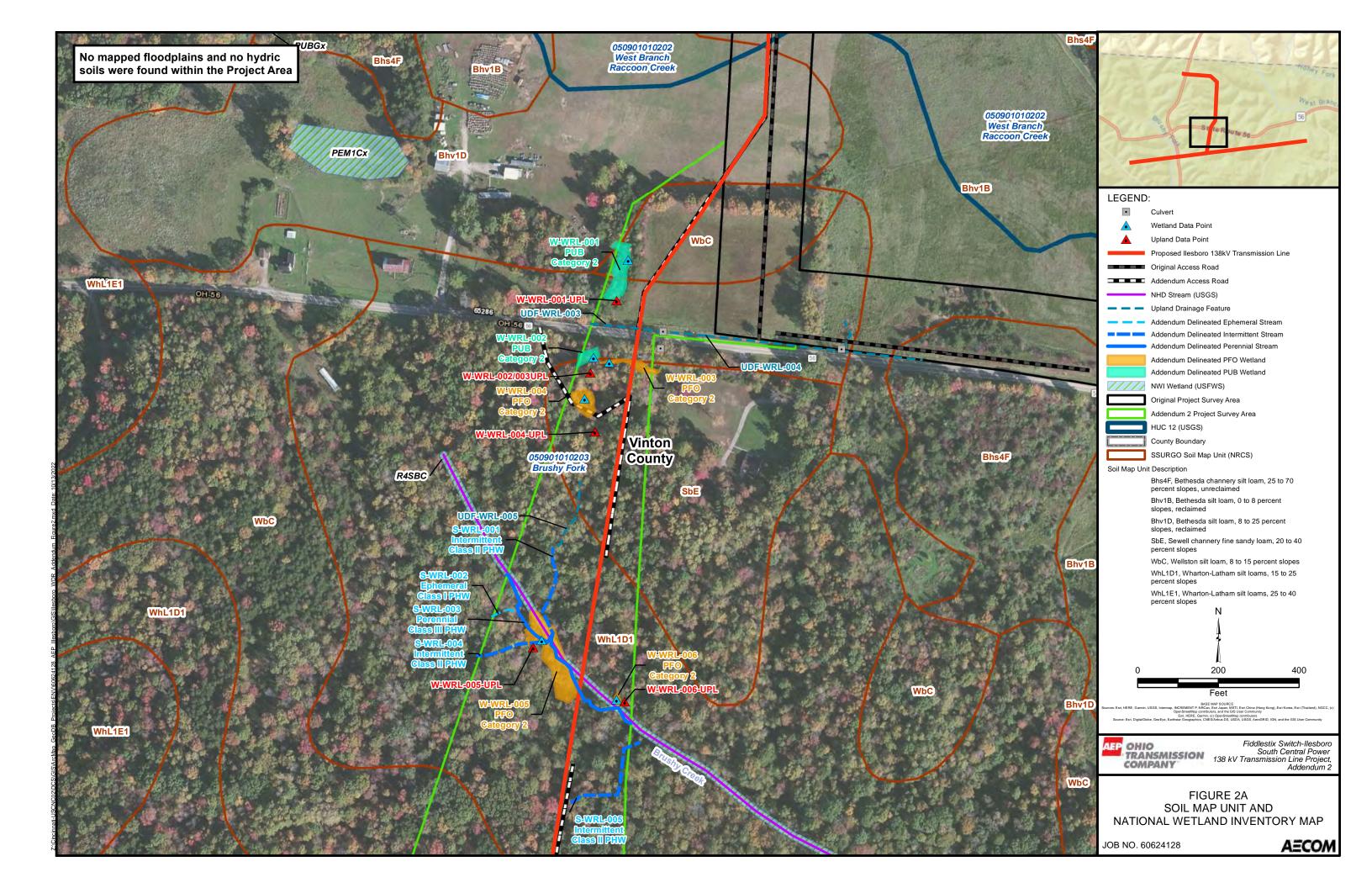
5.0 REFERENCES

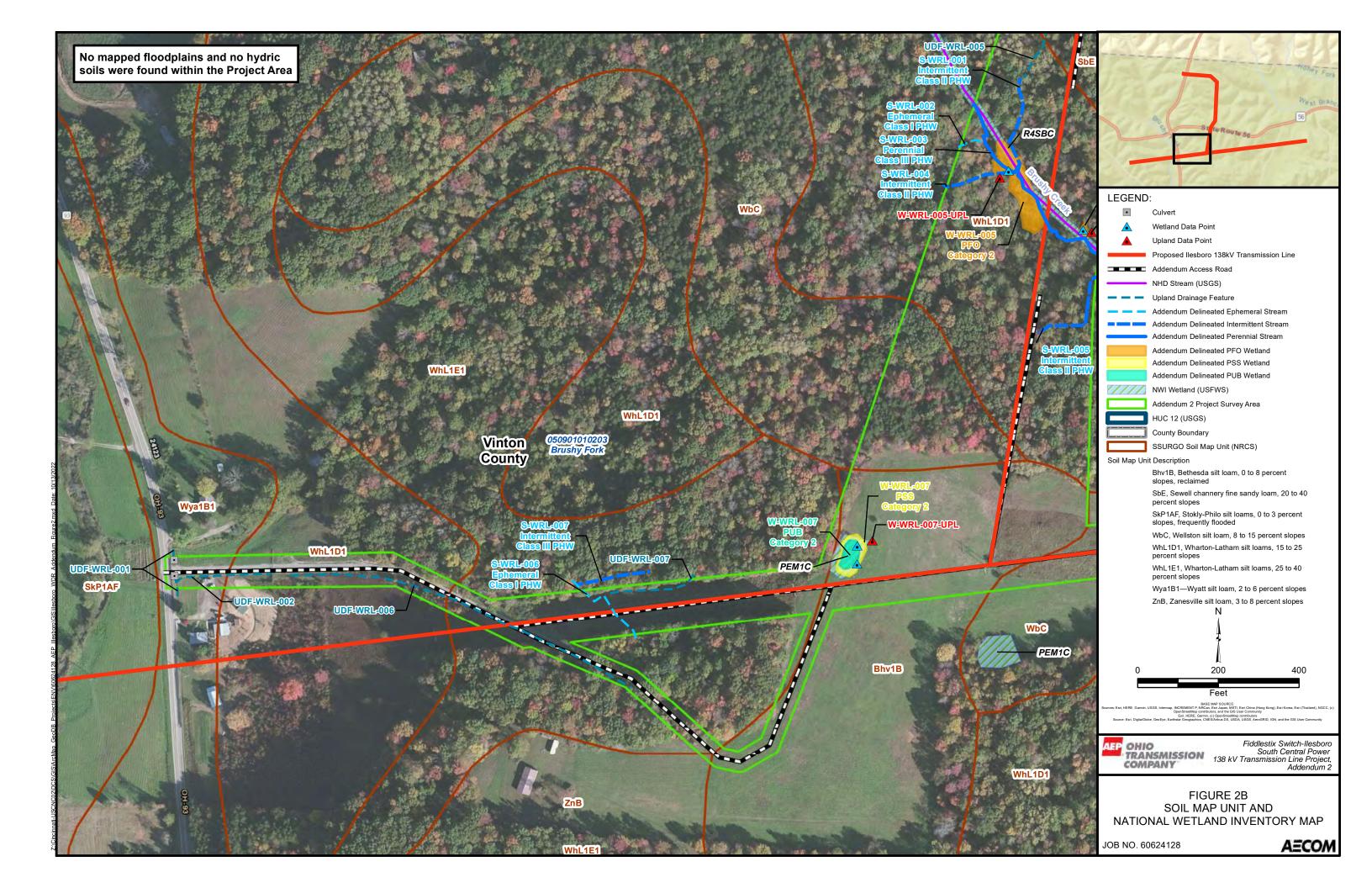
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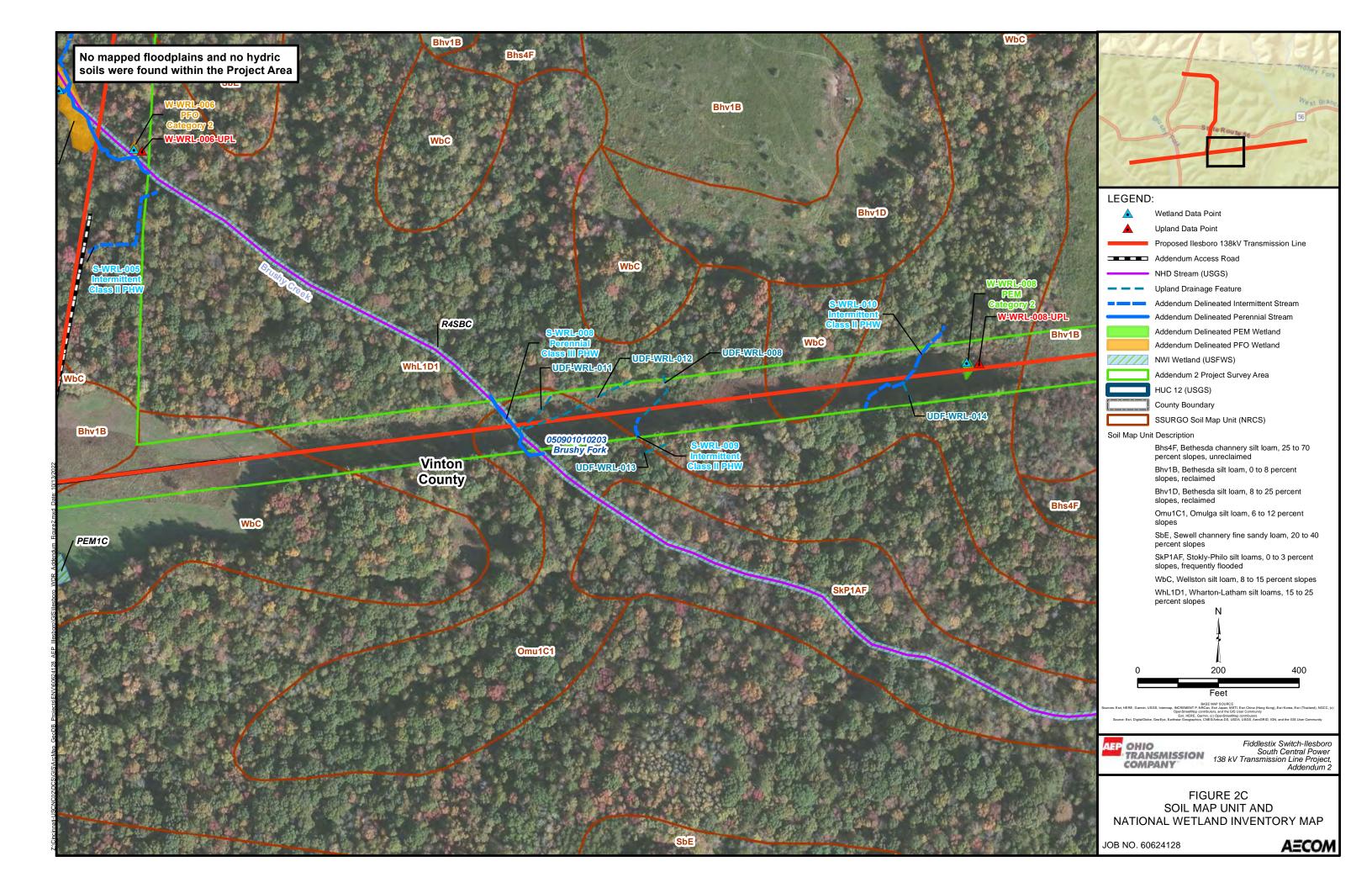


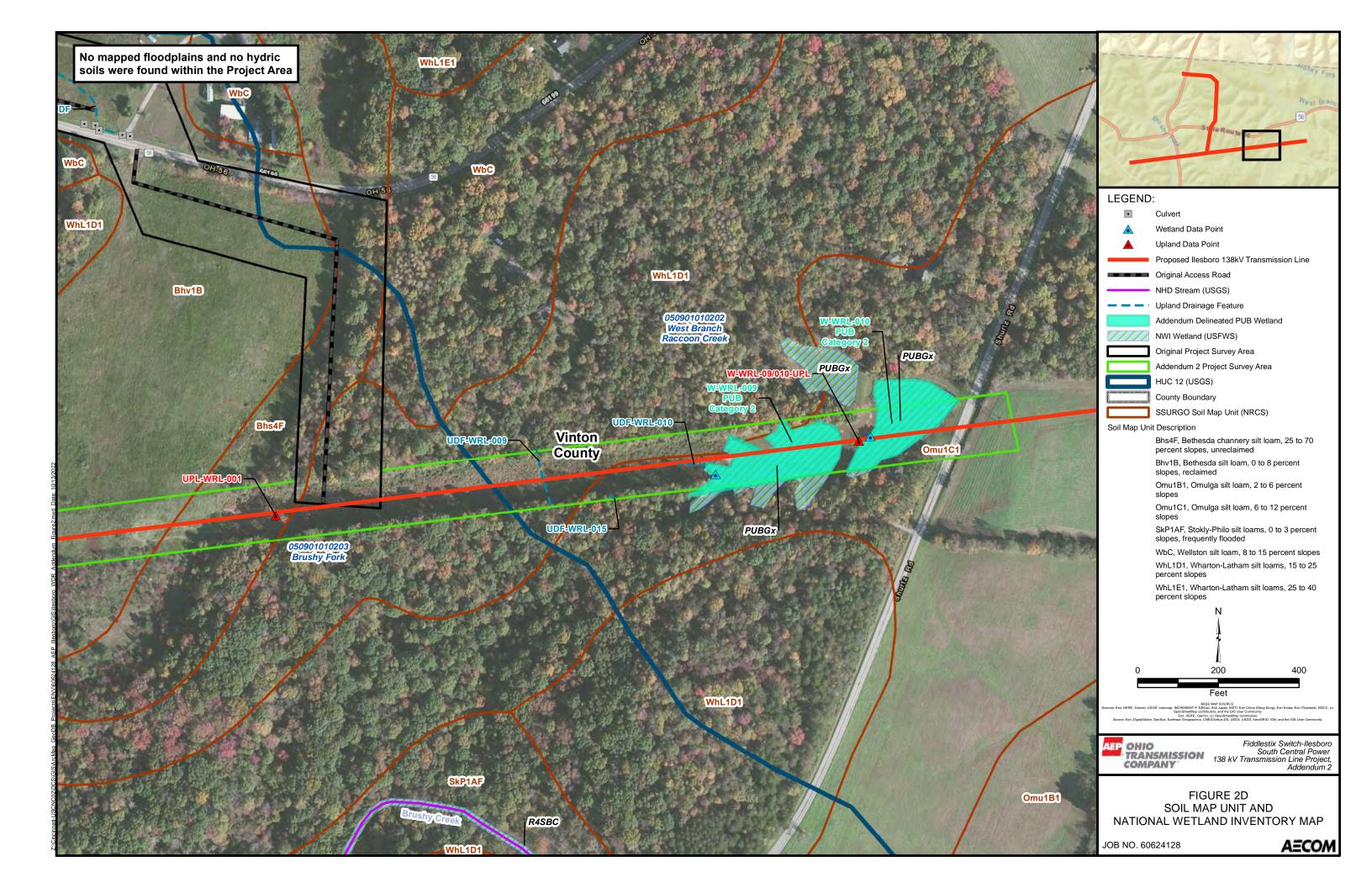
FIGURES

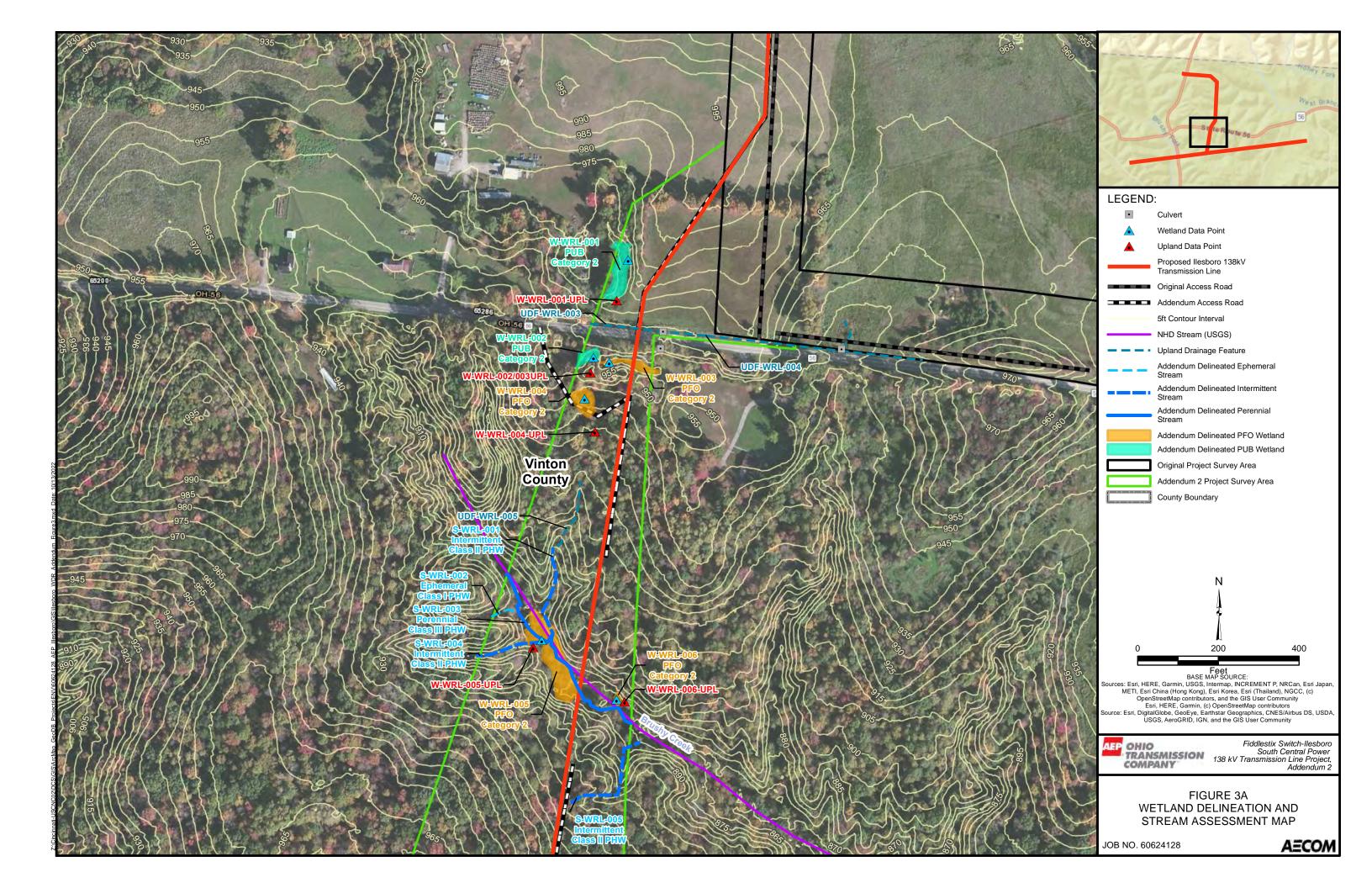


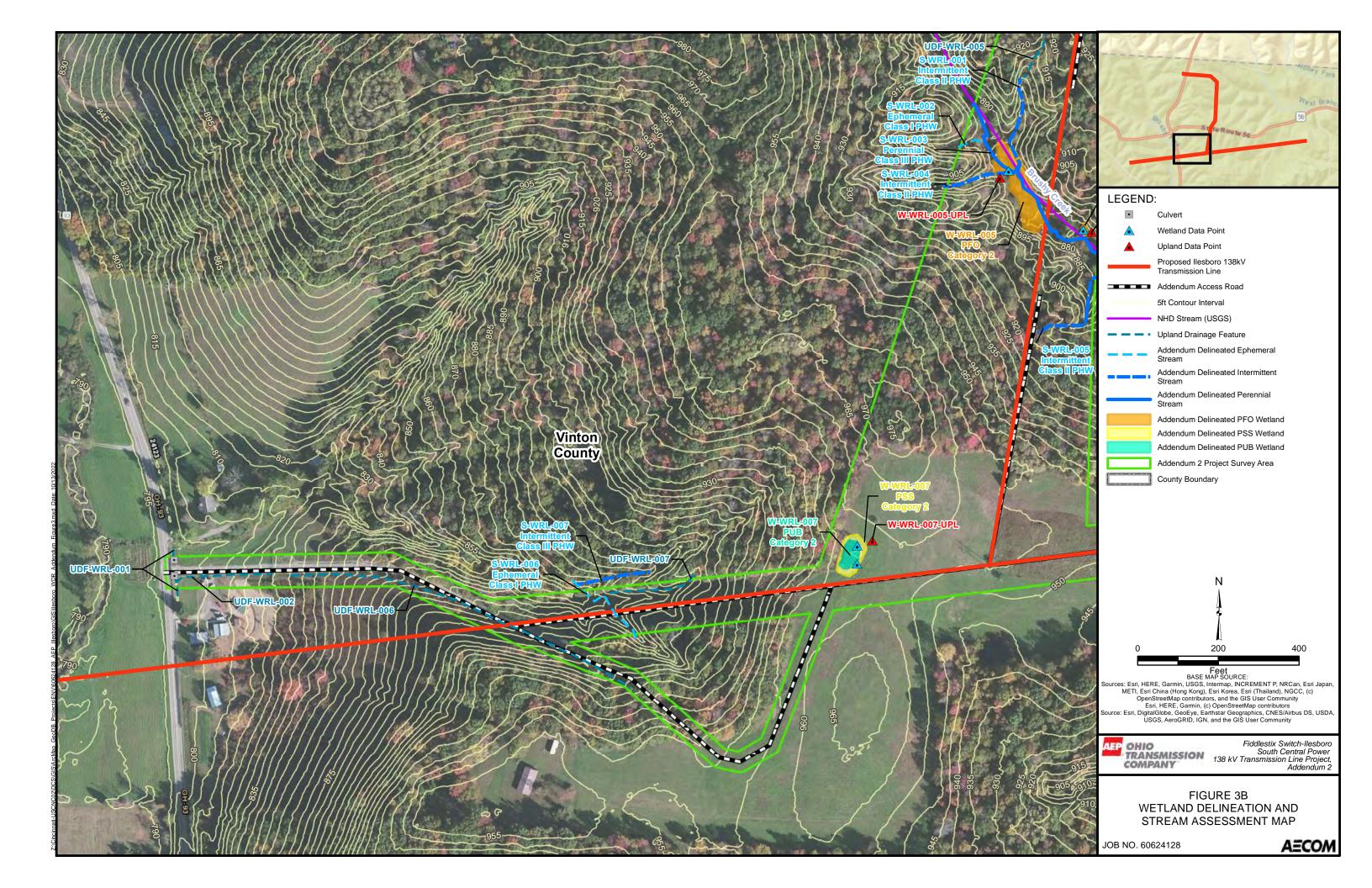


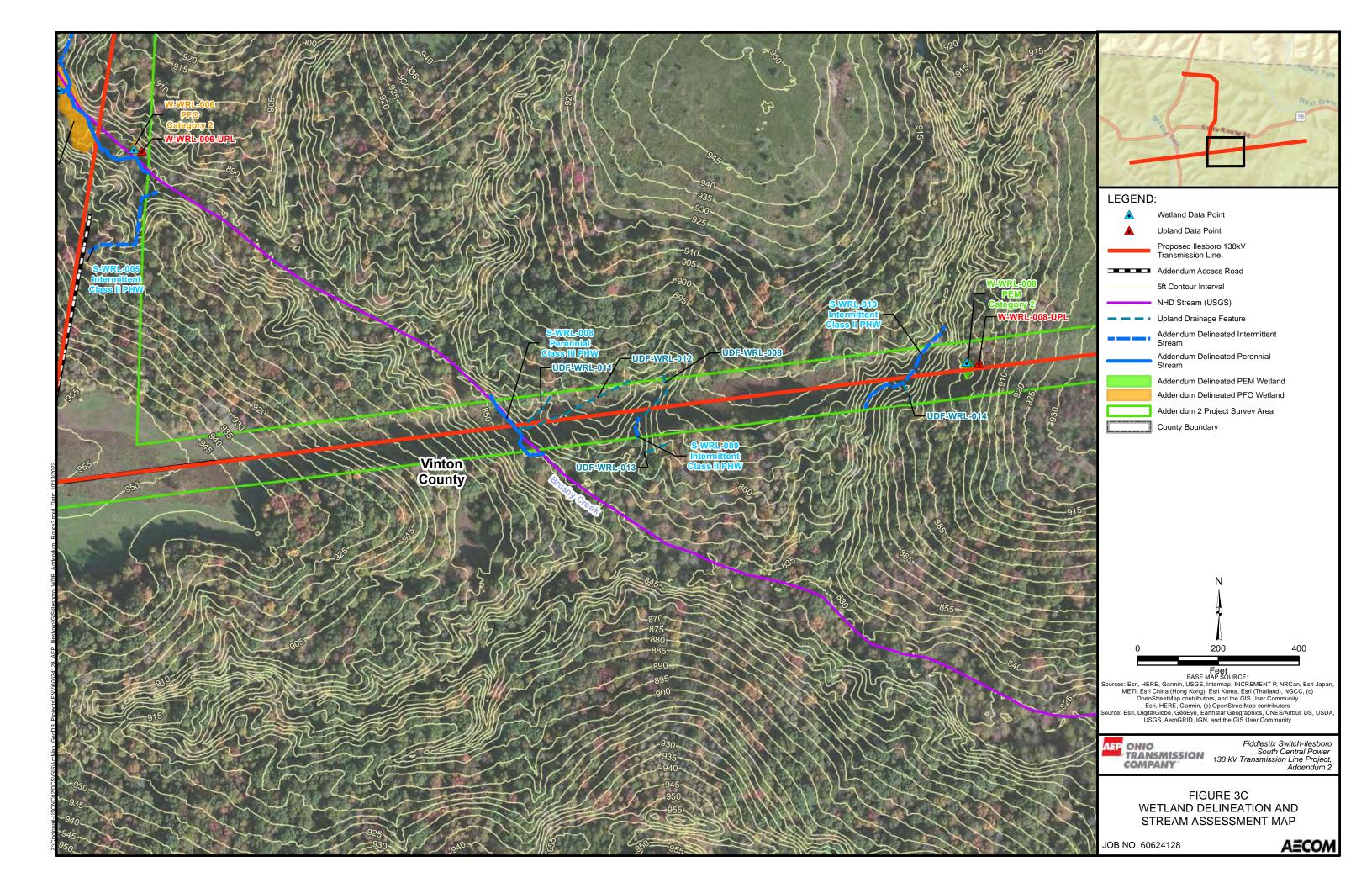


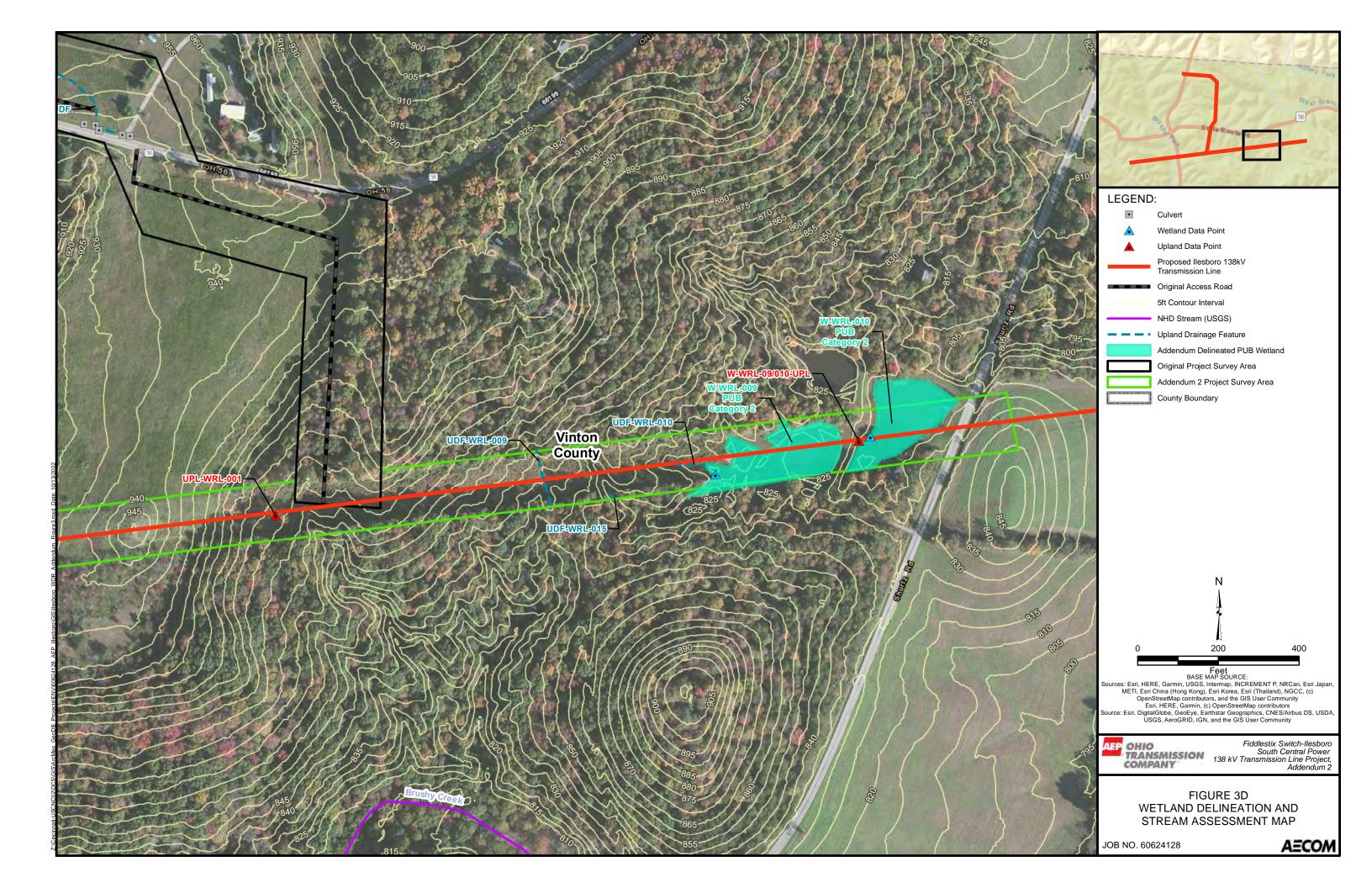


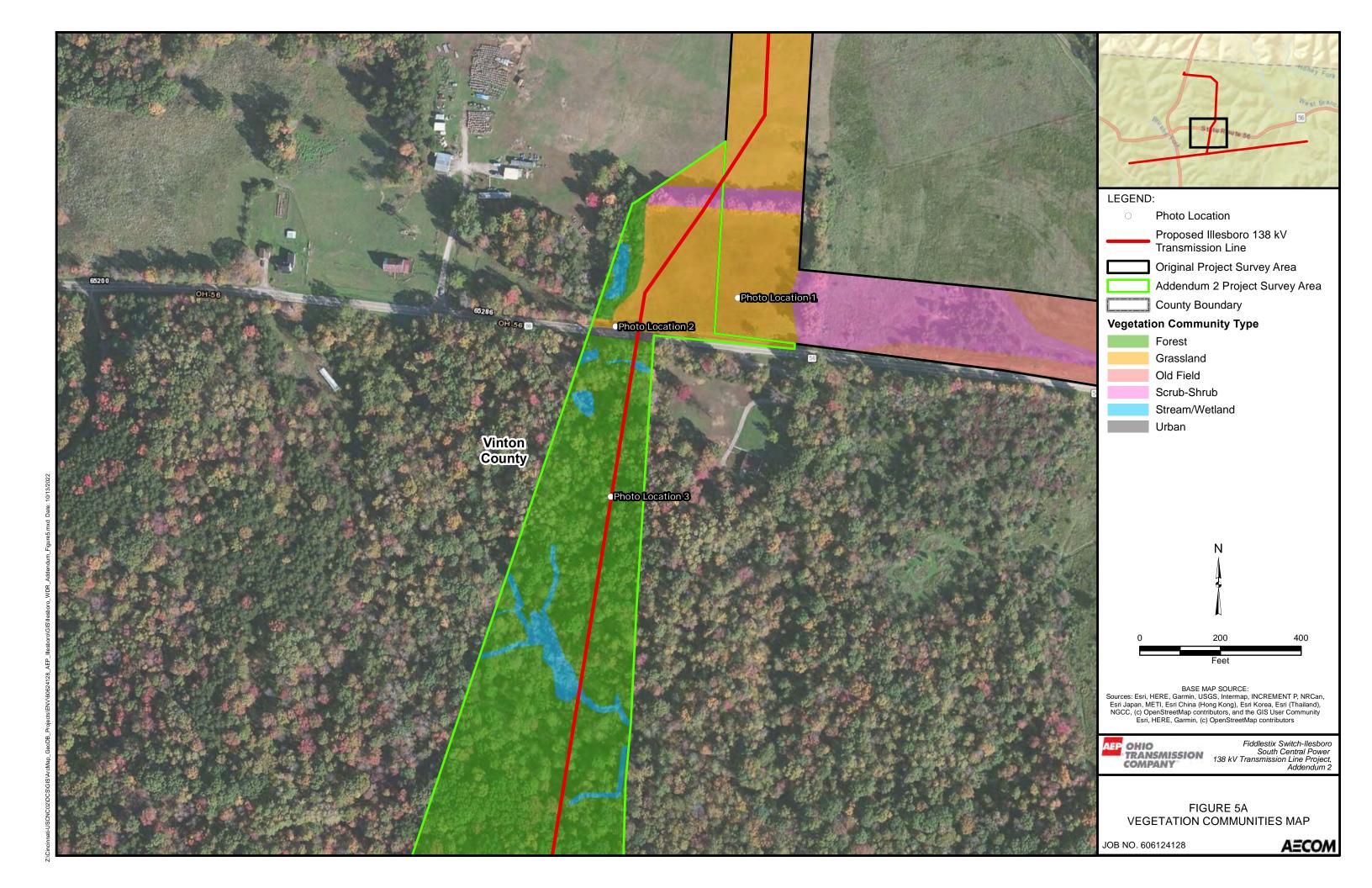


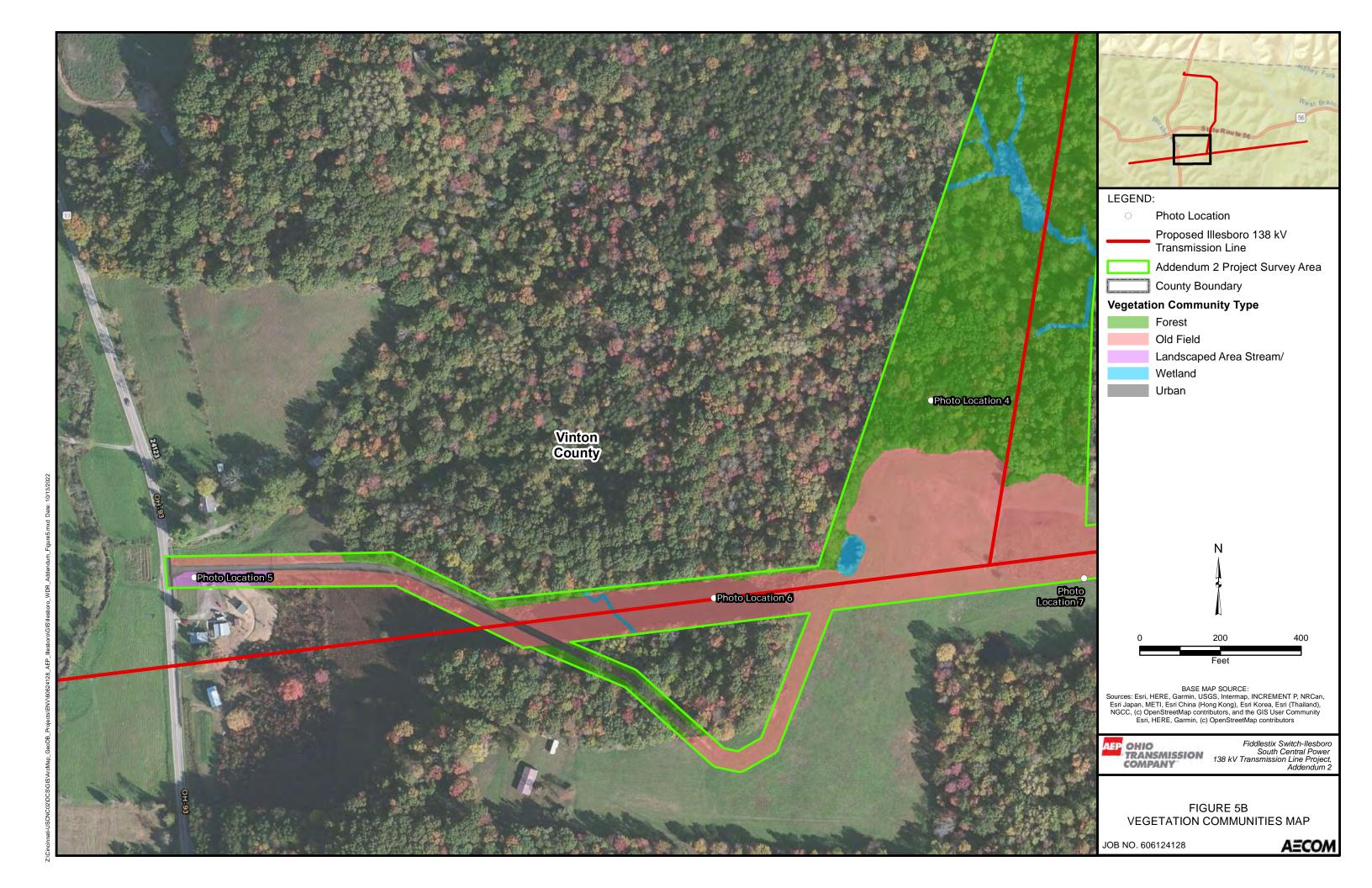


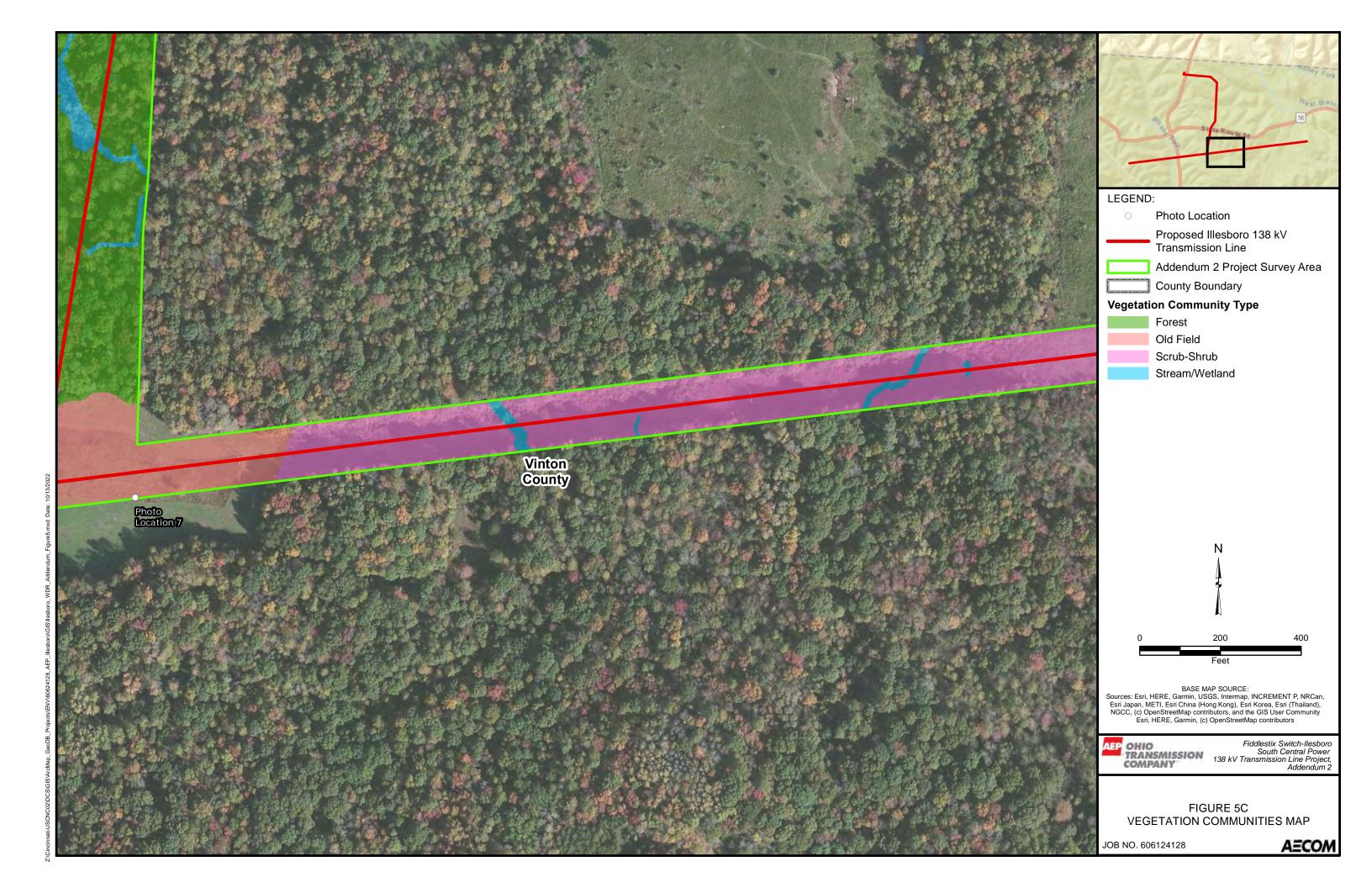


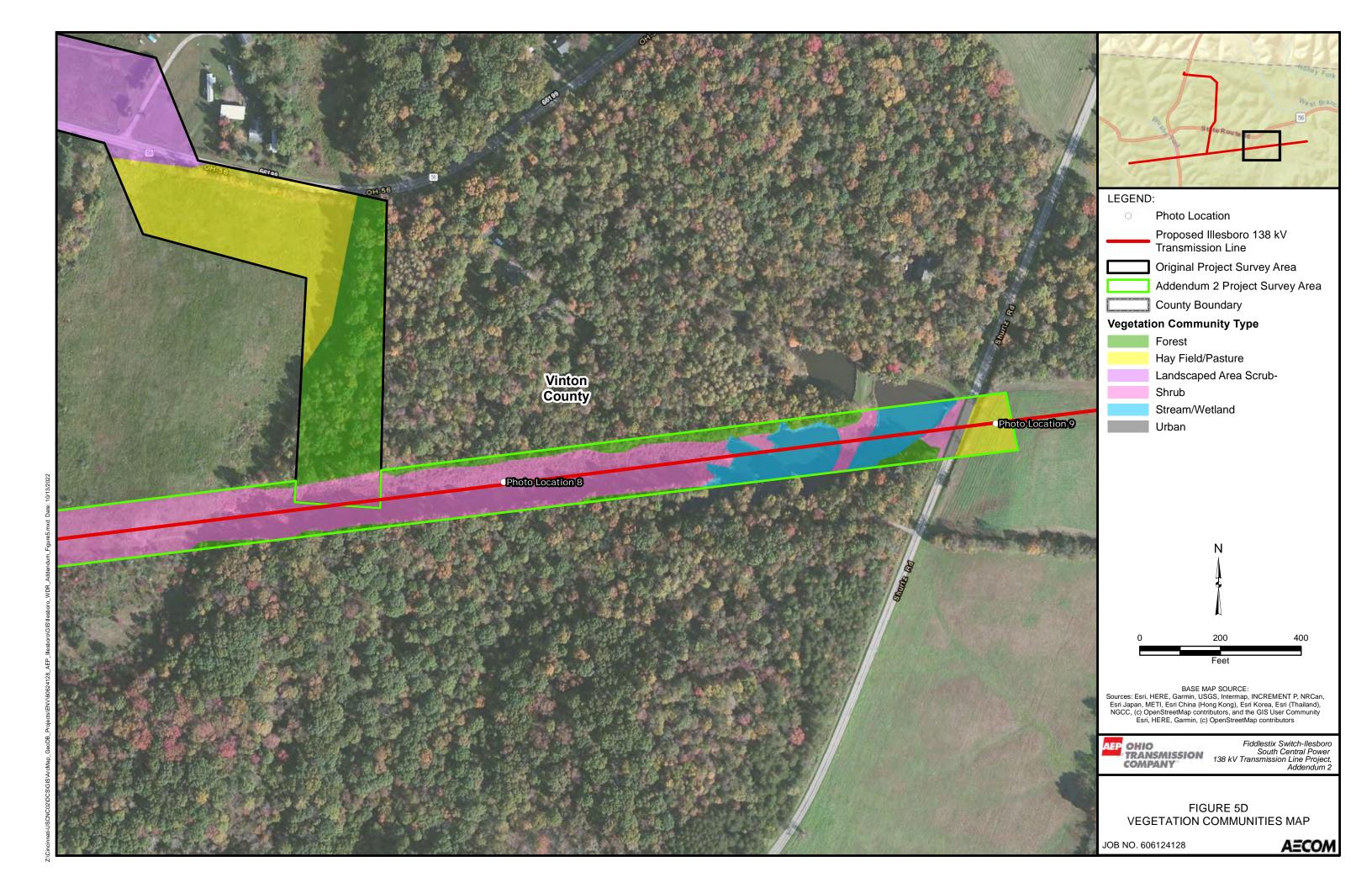














APPENDIX A

Project Wetland Table

FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138 KV T-LINE PROJECT-ADDENDUM 2 WETLAND TABLE

	Loca	ation			Delineated	C	RAM	Nearest	Existing	Proposed	Structure	Propos	sed Impacts
Wetland ID	Latitude	Longitude	Isolated?	Habitat Type	Area (acre)	Score	Category	Structure # (Existing / Proposed)	Structure #		Installation Method	Temporary Matting Area (acre)	Permanent Impact Area (acre)
W-WRL-001	39.38004	-82.45170	Yes	PUB	0.10	46	2	Existing: N/A Proposed: 5	N/A	None	TBD	TBD	TBD
W-WRL-002	39.37937	-82.45200	Yes	PUB	0.03	41	2	Existing: N/A Proposed: 4	N/A	None	TBD	TBD	TBD
W-WRL-003	39.37934	-82.45186	Yes	PFO	0.03	44	2	Existing: N/A Proposed: 4	N/A	None	TBD	TBD	TBD
W-WRL-004	39.37909	-82.45208	No	PFO	0.06	46	2	Existing: N/A Proposed: 4	N/A	None	TBD	TBD	TBD
W-WRL-005	39.37745	-82.45245	No	PFO	0.25	59	2	Existing: N/A Proposed: 2	N/A	None	TBD	TBD	TBD
W-WRL-006	39.37705	-82.45180	No	PFO	0.01	55	2	Existing: N/A Proposed: 2	N/A	None	TBD	TBD	TBD
W-WRL-007	39.37478	-82.45378	No	PSS	0.06	57	2	Existing: 90	N/A	None	TBD	TBD	TBD
VV-VV KL-007	39.37490	-82.45378	INO	PUB	0.05	57	2	Proposed: TBD	N/A	None	TBD	TBD	TBD
W-WRL-008	39.37559	-82.44450	No	PEM	0.01	34	2	Existing: 86 Proposed: TBD	N/A	None	TBD	TBD	TBD
W-WRL-009	39.37607	-82.43777	No	PUB	0.81	55	2	Existing: 84 Proposed: TBD	N/A	None	TBD	TBD	TBD
W-WRL-010	39.37633	-82.43641	No	PUB	0.71	54	2	Existing: 84 Proposed: TBD	N/A	None	TBD	TBD	TBD
		Total:			2.120							TBD	TBD



APPENDIX B

U.S Army Corps of Engineers Wetland Determination Data Forms

OEPA Wetland ORAM Forms

Delineated Features Photographs

(combined per wetland and shown in numerical order)

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP llesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/1/22
Applicant/Owner: AEP			State: OH	Sampling Point:	W-WRL-001
Investigator(s): WRL, CRW		Section, Township, Range:	S3 T12N R17W		
Landform (hillside, terrace, etc.): Undulated	l pool Lo	cal relief (concave, convex,	none): Concave	Slope (%):	3
Subregion (LRR or MLRA): LRR N	Lat: 39.38004		32.45170	Datum:	WGS84
Soil Map Unit Name: WbC: Wellston silt loar	m, 8 to 15 percent slopes		NWI classifica	ation: None	
Are climatic / hydrologic conditions on the site	e typical for this time of ve	ar? Yes	No X (If no,	explain in Remarks	s.)
Are Vegetation , Soil , or Hydro			rcumstances" presen		
Are Vegetation, Soil, or Hydro			plain any answers in R		
SUMMARY OF FINDINGS – Attach			-		res, etc.
			<u>, , , , , , , , , , , , , , , , , , , </u>	<u> </u>	
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area	V V		
Hydric Soil Present?	Yes X No No	within a Wetland?	Yes X	No	
Wetland Hydrology Present?	Yes X No				
Remarks: PUB wetland- a stagnant pool in wooded are wetland extends northewest, outside the stu indicators, hydrophytic vegetation indicator,	dy area. Precipitation has	been higher than average w			
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicators	s (minimum of two I	required)
Primary Indicators (minimum of one is required)	red; check all that apply)		Surface Soil Cra	cks (B6)	
X Surface Water (A1)	True Aquatic Plants		Sparsely Vegeta	ted Concave Surfa	ce (B8)
X High Water Table (A2)	X Hydrogen Sulfide Od		Drainage Patterr		
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines		
X Water Marks (B1)	Presence of Reduce	` '	Dry-Season Wat		
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows		
Drift Deposits (B3)	Thin Muck Surface (e on Aerial Imagery	/ (C9)
Algal Mat or Crust (B4)	Other (Explain in Re	marks)	Stunted or Stress	, ,	
Iron Deposits (B5)			X Geomorphic Pos		
Inundation Visible on Aerial Imagery (B7	")		Shallow Aquitard		
X Water-Stained Leaves (B9)			Microtopographic		
Aquatic Fauna (B13)			X FAC-Neutral Tes	st (D5)	
Field Observations:					
Surface Water Present? Yes X	No Depth (inch				
Water Table Present? Yes X	No Depth (inch	· ——			
Saturation Present? Yes X	No Depth (inch	es): 0 Wetland H	Hydrology Present?	Yes X	No
(includes capillary fringe)	- Norda a conflor a salah a basa		9 - 1.1		
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photo	s, previous inspections), if av	/allable:		
Remarks:					
Multiple primary and one secondary wetland	hydrology indicators pres	sent.			

VEGETATION (Four Strata) – Use scientific names of plants.

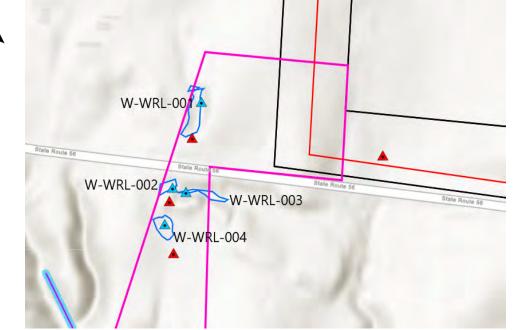
	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:
1. Betula nigra	60	Yes	FACW	Number of Dominant Species
2. Acer saccharinum	10	No	FACW	That Are OBL, FACW, or FAC: 3 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 3 (B)
··· 5.				``
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
				Prevalence Index worksheet:
7	70	Tatal Cause		
50% ()		=Total Cover	4.4	Total % Cover of: Multiply by:
	35 20%	of total cover:	14	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15' r)			FACW species 80 x 2 = 160
1. Betula nigra	5	Yes	FACW	FAC species 0 x 3 = 0
2. Fraxinus pennsylvanica	5	Yes	FACW	FACU species 0 x 4 = 0
3				UPL species 0 x 5 = 0
4.				Column Totals: 80 (A) 160 (B)
5.				Prevalence Index = B/A = 2.00
6.				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8.				X 2 - Dominance Test is >50%
9.				X 3 - Prevalence Index is ≤3.0 ¹
ə	10 :	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
500/ ()			•	data in Remarks or on a separate sheet)
	5 20%	of total cover:	2	· · · · · · · · · · · · · · · · · · ·
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)
1				¹ Indicators of hydric soil and wetland hydrology must
2				be present, unless disturbed or problematic.
3				Definitions of Four Vegetation Strata:
4.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5.				more in diameter at breast height (DBH), regardless of
6.				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
				Have All barbaccas (non woods) plants regardless
10.				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
		=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover:	20%	of total cover:		height.
Woody Vine Stratum (Plot size: 30' r)				
1.				
2.				
3.				
4.				
 5.				l.,
		=Total Cover		Hydrophytic
E09/ of total cover:				Vegetation
50% of total cover:	20%	of total cover:		Present?
Remarks: (Include photo numbers here or on a sep Hydrophytic vegetation indicator present.				<u> </u>

Sampling Point: W-WRL-001

SOIL Sampling Point: W-WRL-001

Profile Desc	ription: (Describe to	the depth ne	eded to docu	ument th	ne indica	tor or co	onfirm the abs	ence of indicat	ors.)	
Depth	Matrix		Redo	x Feature	es					
(inches)	Color (moist)	% Co	olor (moist)	%	Type ¹	Loc ²	Texture		Remark	(S
¹ Type: C=Co	ncentration, D=Deple	tion RM-Red	uced Matrix N	 /S_Masi	ked Sand	d Grains	² l o	cation: PL=Por	a Lining M-M	1atriy
Hydric Soil I	· ·	ziion, rtivi=rtea	deca matrix, n	/IO=IVIASI	nca Gari	J Grains.	LO			Hydric Soils ³ :
Histosol (Polyvalue Be	olow Sur	faco (S8)	/MI DA	147 149)		(A10) (MLR	-
	pedon (A2)		_Folyvalde Be Thin Dark St						rie Redox (A1	,
Black His			Loamy Muck	•	, .		•		147, 148)	0)
	Sulfide (A4)		Loamy Gleye			ILIXA IS	5)		Floodplain Soi	ile (F10)
	Layers (A5)		Depleted Ma						136, 147)	115 (1-19)
	ck (A10) (LRR N)		Redox Dark						it Material (F2	1)
	Below Dark Surface	(Δ11)	Depleted Da		` '				MLRA 127, 1	'
	k Surface (A12)		Redox Depre		. ,				ow Dark Surfa	
	ucky Mineral (S1)		Iron-Mangan			2) (LRR N	N.		olain in Remar	` '
	eyed Matrix (S4)		MLRA 136		, , ,	-, (- : : : :	-,			,
Sandy Re			Umbric Surfa	•) (MLRA	122, 136	3)	³ Indicators of h	vdrophytic ve	getation and
	Matrix (S6)		Piedmont Flo						drology must	-
Dark Sur			Red Parent I					-	turbed or prob	-
	ayer (if observed):			riatoriai	(1 2 1) (111		,,e, I	unicoc dici	arboa or prob	iornatio.
	ayer (ii observed).									
Type: _ Depth (in	chae).		<u>—</u>				Hydric Soil	Drosont?	Yes X	No
							Hydric 30ii	riesent:	169 /	
Remarks:	a dua ta hudragaa a	ulfida adar bud	ia aail indiaata							
Soil pit flot du	g due to hydrogen su	illide odol fiya	ic soil illuicato	piesen	ι.					

Background Information							
B. Leopold and C.Wyse							
9/1/2022							
AECOM							
525 Vine St., Ste. 1800, Cincinnati, OH 45202							
859-640-5603							
Bill.Leopold@aecom.com							
W-WRL-001							
РИВ							
DEPRESSION							

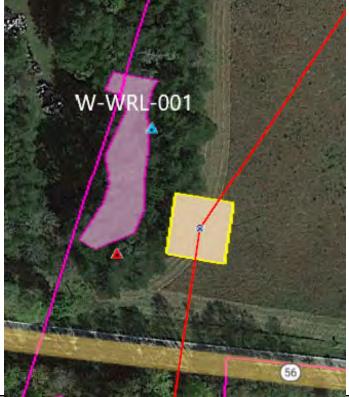


Lat/Long or UTM Coordinate:	39.38004, -82.45170
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	Brushy Fork (HUC: 050901010203)
Site Visit:	9/1/2022
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-WRL-001		
Wetland Size (delineated acres):	0.10	Wetland Size (Estimated total acres):	0.10

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.





Comments, Narrative Discussion, Justification of Category Changes:

PUB wetland- a stagnant pool in wooded area, potentially an old strip mine pit. The wetland boundary was delineated by watermarks on trees. The wetland extends northewest, outside the study area. Precipitation has been higher than average within the past 30 days. Wetland hydrology indicators, hydrophytic vegetation indicator, and hydric soil indicator present.

Final score:	40	Category:	2
i iliai scole.	40	oategory.	

Wetland ID:	W-WRL-001
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Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	x	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

Wetland ID: W-WRL-001

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast breast with (albh.) acceptable of the cover of the c	YES Wetland should be evaluated for	*NO Go to Question 9a
	height (dbh), generally diameters greater than 45cm (17.7in) dbh?	possible Category 3 status. Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	*NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	*NO Go to Question 9c
0-	Are Leke Eric water levels the westend's primer : budgets size influence	\/F0	INC
90	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	*NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton,	YES	*NO
	Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or	YES	*NO
	all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating
Ь		l .	

Wetland ID: W-WRL-001

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

: AEP Ilesboro 138 kV Project Rater(s): B. Leopold	and C.Wyse	Date: 9/1/2022
	Field ID:	
4.01 4.01 Matria 4 Wattend Area (ai-a)	W-WRL-001	
1.0 1.0 Metric 1. Wetland Area (size).	VV-VVRL-001	
s 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)	Delineated acres:	0.10
10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts)	Total acres:	
0.3 to <3 acres (0.12 to <1.2ha) (2pts) x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)	Total acres.	0.10
<0.1 acres (0.04ha) (0 pts)		
6.0 7.0 Metric 2. Upland buffers and surrou	inding land use	
	J	
pts. subtotal Za. Calculate average buffer width. Select only one ar WIDE. Buffers average 50m (164ft) or more around wetla	-	
MEDIUM. Buffers average 25m to <50m (82 to <164ft) ar	round wetland perimeter (4)	
NARROW. Buffers average 10m to <25m (32ft to <82ft) a x VERY NARROW. Buffers average <10m (<32ft) around v		
2b. Intensity of surrounding land use. Select one or d	louble check and average.	
x VERY LOW. 2nd growth or older forest, prairie, savannah		
x LOW. Old field (>10 years), shrubland, young second gro MODERATELY HIGH. Residential, fenced pasture, park,		
HIGH. Urban, industrial, open pasture, row cropping, min		
19.0 26.0 Metric 3. Hydrology.		
ts. subtotal 3a. Sources of Water. Score all that apply.	3b. Connectivity. Score all t	hat apply.
High pH groundwater (5) Other groundwater (3)	100 year floodplain (1) Between stream/lake and oth	er human use (1)
x Precipitation (1)	x Part of wetland/upland (e.g. for	
x Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5)		uration. Score one or dbl check.
3c. Maximum water depth. Select one.	x Semi- to permanently inundate	
x >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2)	Regularly inundated/saturated Seasonally inundated (2)	1 (3)
<0.4m (<15.7in) (1)	Seasonally saturated in upper	r 30cm (12in) (1)
3e. Modifications to natural hydrologic regime. Score None or none apparent (12)	one or double check and average. Check all disturbances obs	erved
x Recovered (7)	ditch	point source (nonstormwater)
Recovering (3) Recent or no recovery (1)	tile x dike	filling/grading road bed/RR track
	weir	x dredging
	stormwater input	Other:
12.0 38.0 Metric 4. Habitat Alteration and Dev	elopment.	
ts. subtotal 4a. Substrate disturbance. Score one or double check	k and average.	
None or none apparent (4) x Recovered (3)		
Recovering (2)		
Recent or no recovery (1) 4b. Habitat development. Select only one and assign	score.	
Excellent (7)		
Very good (6) Good (5)		
Moderately good (4)		
x Fair (3) Poor to fair (2)		
Poor (1)		
4c. Habitat alteration. Score one or double check and None or none apparent (9)	l average. Check all disturbances observ	ved
x Recovered (6)	mowing	shrub/sapling removal
Recovering (3) Recent or no recovery (1)	grazing x clearcutting	herbaceous/aquatic bed removal x sedimentation
Lecent of no recovery (1)	selective cutting	dredging
	woody debris removal toxic pollutants	farming nutrient enrichment
	toxic polititarits	nathorit erincimient
38.0		
subtotal this page ORAM v. 5.0 Field Form Quantitative Rating		

Wetla	nd ID:	W-WRL-001					
Site:	AEP Iles	boro 138 kV Project	Rater(s):	В. І	_eopold and C.Wyse	Date:	9/1/2022
					E. LUB		
	20.6	ភ			Field ID: W-WRL-001		
	38.0				VV-VVRL-001		
	subtotal this page						
	0.0 38.0	Metric 5. Special We	tlands				
max 10 pts.	subtotal	Check all that apply and					
max 10 pts.	subtotal	Bog (10) Fen (10)	i score as muicateu.				
		Old growth forest (10)					
		Mature forested wetland (5) Lake Erie coastal/tributary wetlar	nd-unrestricted hydrology (10)			
		Lake Erie coastal/tributary wetlan Lake Plain Sand Prairies (Oak O					
		Relict Wet Praires (10)					
		Known occurrence state/federal Significant migratory songbird/wa			(10)		
		Category 1 Wetland. See Questi					
		-		_			
8	3.0 46.0		•	ersion			
max 20pts.	subtotal	6a. Wetland Vegetation C		0	Vegetation Community (Absent or comprises <0.1ha (0.24		
		Score all present using 0 to 3 sci Aquatic bed	aie.	1	Present and either comprises sm		
		Emergent			vegetation and is of moderate qua	ality, or comprises a	
		0 Shrub 0 Forest		2	significant part but is of low qualit Present and either comprises sign		
		Mudflats		2	vegetation and is of moderate qua		
		2 Open water			part and is of high quality		
		Other 6b. horizontal (plan view) Inter	spersion.	3	Present and comprises significan vegetation and is of high quality	t part, or more, of wetland's 3	
		Select only one.	•				
		High (5) Moderately high(4)			Narrative Description of Vegeta Low spp diversity and/or predomi		
		Moderate (3)			disturbance tolerant native specie		
		x Moderately low (2)			Native spp are dominant compon		
		Low (1) None (0)			although nonnative and/or disturb can also be present, and species		
		6c. Coverage of invasive plant			moderately high, but generallyw/o	presence of rare	
		Table 1 ORAM long form for list. or deduct points for coverage	Add		threatened or endangered spp to A predominance of native species		
		Extensive >75% cover (-5)			and/or disturbance tolerant native		
		Moderate 25-75% cover (-3)			absent, and high spp diversity an		
		Sparse 5-25% cover (-1) Nearly absent <5% cover (0)			the presence of rare, threatened,	or endangered spp	
		x Absent (1)			Mudflat and Open Water Class	Quality	
		6d. Microtopography.	-1-		Absent <0.1ha (0.247 acres)		
		Score all present using 0 to 3 sci O Vegetated hummucks/tussucks	aie.		Low 0.1 to <1ha (0.247 to 2.47 ac Moderate 1 to <4ha (2.47 to 9.88		
		1 Coarse woody debris >15cm (6ir			High 4ha (9.88 acres) or more		
		O Standing dead >25cm (10in) dbh Amphibian breeding pools	1		Microtopography Cover Scale		
		2 1/ aripinibian breeding pools		0	Absent		
				1	Present very small amounts or if	more common	
				2	of marginal quality Present in moderate amounts, but	it not of highest	
	46.0	TOTAL (Max 100 pts)			quality or in small amounts of high		
		2 Category		3	Present in moderate or greater ar		
		-			and of highest quality		

W-WRL-001-ORAM.xlsx / Quantitative Form 9/26/2022

Wetland ID: W-WRL-001

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		1	
	Metric 2. Buffers and surrounding land use	(6	
	Metric 3. Hydrology	1	9	
	Metric 4. Habitat	1	2	
	Metric 5. Special Wetland Communities		0	
	Metric 6. Plant communities, interspersion, microtopography	8		
	TOTAL SCORE	4	6	Category based on score breakpoints 2

 $Complete\ Wetland\ Categorization\ Worksheet.$

Wetland ID:	W-WRL-001
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	*YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	*NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
		Final Category	,
		i illai Gategori	



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-001

Date:

September 1, 2022

Description:

PUB

Category 2

Facing North



Wetland W-WRL-001

Date:

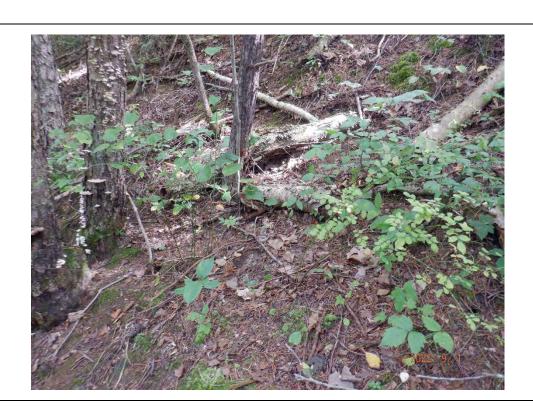
September 1, 2022

Description:

PUB

Category 2

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-001

Date:

September 1, 2022

Description:

PUB

Category 2

Facing South



Wetland W-WRL-001

Date:

September 1, 2022

Description:

PUB

Category 2

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-001

Date:

September 1, 2022

Description:

PUB

Category 2

Soils



U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/1/22
Applicant/Owner: AEP			State: OH	Sampling Point:	W-WRL-001-UPL
Investigator(s): WRL, CRW		Section, Township, Range:	S3 T12N R17W	_	
Landform (hillside, terrace, etc.): Undulating	Lo	cal relief (concave, convex,		Slope (%):	3
Subregion (LRR or MLRA): LRR N	Lat: 39.37976		32.45180	Datum:	WGS84
Soil Map Unit Name: WhL1D1: Wharton-Lat			NWI classificat		VV C C C T
Are climatic / hydrologic conditions on the site	typical for this time of ye	ar? Yes	No X (If no, e	explain in Remark	s.)
Are Vegetation , Soil , or Hydro			rcumstances" present?		
Are Vegetation, Soil, or Hydro			lain any answers in Re		
SUMMARY OF FINDINGS – Attach			-		res. etc.
			,		
, , , ,	Yes X No	Is the Sampled Area			
	Yes No X	within a Wetland?	Yes	No X	
Wetland Hydrology Present?	Yes No X				
Upland point associated with wetland W-WR Precipitation has been higher than average v		ation indicator present, but la	acking hydric soil and w	etland hydrology	indicators.
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two	required)
Primary Indicators (minimum of one is require	ed; check all that apply)		Surface Soil Cracl	, ,	
Surface Water (A1)	True Aquatic Plants		Sparsely Vegetate	ed Concave Surfa	ce (B8)
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Patterns		
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines (
Water Marks (B1)	Presence of Reduce		Dry-Season Wate		
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows		(00)
Drift Deposits (B3)	Thin Muck Surface (Saturation Visible		/ (C9)
Algal Mat or Crust (B4)	Other (Explain in Re	marks)	Stunted or Stresse		
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7	١.		Geomorphic Posit Shallow Aquitard	, ,	
Water-Stained Leaves (B9))		Microtopographic		
Aquatic Fauna (B13)			X FAC-Neutral Test	` '	
Field Observations:			77.0 1100.00.00	(20)	
	No X Depth (inch	es).			
Water Table Present? Yes	No X Depth (inch				
Saturation Present? Yes	No X Depth (inch		lydrology Present?	Yes	No_X
(includes capillary fringe)			,		. —
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photo	s, previous inspections), if av	vailable:		
Remarks:					
Only one secondary hydrology indicator pres	sent.				

VEGETATION (Four Strata) – Use scientific names of plants.

Troe Stratum (Blot aize: 20'r)	Absolute	Dominant Species?	Indicator	Dominance Test worksheet
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status UPL	Dominance Test worksheet:
1. Pinus virginiana	50	Yes		Number of Dominant Species
2. Acer saccharinum	20	Yes	FACW	That Are OBL, FACW, or FAC:6 (A)
3. Cornus florida	15	No	FACU	Total Number of Dominant
4				Species Across All Strata: 9 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 66.7% (A/B)
7				Prevalence Index worksheet:
	85	=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 43	3 20%	of total cover:	17	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15' r)				FACW species 60 x 2 = 120
1. Cornus florida	15	Yes	FACU	FAC species 45 x 3 = 135
2. Betula nigra	15	Yes	FACW	FACU species 63 x 4 = 252
3. Fraxinus pennsylvanica	10	Yes	FACW	UPL species 50 x 5 = 250
4. Carya ovata	3	No	FACU	Column Totals: 218 (A) 757 (B)
5. Ligustrum vulgare	3	No	FACU	Prevalence Index = B/A = 3.47
6. Rosa multiflora	2	No	FACU	Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8.				X 2 - Dominance Test is >50%
9.				3 - Prevalence Index is ≤3.0 ¹
	48	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 24	4 20%	of total cover:	10	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Carex blanda	20	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must
Desmodium canadense	5	No	FAC	be present, unless disturbed or problematic.
Fraxinus pennsylvanica	15	Yes	FACW	Definitions of Four Vegetation Strata:
4.		100	171011	
5.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
6.				height.
7.				
				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft
8				(1 m) tall.
9.				
10.				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
		=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 20	20%	of total cover:	8	height.
Woody Vine Stratum (Plot size: 30' r)				
Toxicodendron radicans	20	Yes	FAC	
2. Parthenocissus quinquefolia	5	No	FACU	
3. Lonicera japonica	20	Yes	FACU	
4				
5.				Hydrophytic
	45	=Total Cover		Vegetation
50% of total cover: 23	3 20%	of total cover:	9	Present? Yes X No
Remarks: (Include photo numbers here or on a sepa Hydrophytic indicator present.	rate sheet.)			

Sampling Point: W-WRL-001-UPL

SOIL Sampling Point: W-WRL-001-UPL

	ription: (Describe	to the dep				tor or co	onfirm the abs	ence of indic	ators.)	
Depth	Matrix			k Featur	- 1					
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture		Rem	arks
0-3	10YR 3/3	100					Loamy/Clay	ey		
3-14	10YR 4/6	100					Loamy/Clay	ey		
										_
										_
¹ Type: C=Co	oncentration, D=Depl	letion, RM:	=Reduced Matrix, N	/S=Mas	ked Sand	d Grains.	² Lc	cation: PL=P	ore Lining, M	=Matrix.
Hydric Soil I	ndicators:									tic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be	low Su	rface (S8)	(MLRA	147, 148)	2 cm Mu	ck (A10) (ML	.RA 147)
	ipedon (A2)		Thin Dark Su						airie Redox ((A16)
Black His			Loamy Muck			ILRA 13	6)		147, 148)	0-11- (540)
	n Sulfide (A4) Layers (A5)		Loamy Gleye Depleted Ma						t Floodplain (Solis (F19)
	ck (A10) (LRR N)		Redox Dark						ent Material (F21)
	Below Dark Surface	(A11)	Depleted Da		, ,				de MLRA 12	,
Thick Da	rk Surface (A12)		Redox Depre	essions	(F8)			Very Sha	allow Dark Su	urface (F22)
	ucky Mineral (S1)		Iron-Mangan		sses (F12	2) (LRR I	١,	Other (E	xplain in Ren	narks)
	leyed Matrix (S4)		MLRA 136) (MI DA	400 40	•\	31		
	edox (S5) Matrix (S6)		Umbric Surfa Piedmont Flo							vegetation and ust be present,
	face (S7)		Red Parent I	•	•	, ,	•		sturbed or p	-
	_ayer (if observed):		Red r drent r	viatoriai	(1 2 1) (111		, 141, 140,	4111000 41	otarbea or pr	obiematio.
Type:	Layer (II observed).									
Depth (in	nches):						Hydric Soil	Present?	Yes	No X
Remarks:	-						-			
No hydric soi	I indicators present.									

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP llesboro 138 kV Project			City/County: Vin	ton	Sar	mpling Date:	9/1/22
Applicant/Owner: AEP				State:	OH Sar	mpling Point:	W-WRL-002
Investigator(s): WRL, CRW			Section, Township, F	Range: S3 T12N R17	'W		
Landform (hillside, terrace, etc.): Undulating	7	Lo		onvex, none): Conca		Slope (%):	0
Subregion (LRR or MLRA): LRR N		9.37937		_ong: -82.45200		Datum:	WGS84
Soil Map Unit Name: WhL1D1: Wharton-Latl					lassification:	- None	
Are climatic / hydrologic conditions on the site			· · · · · · · · · · · · · · · · · · ·	No X	(If no expla	in in Remark	s)
Are Vegetation , Soil , or Hydro		-	_	rmal Circumstances"		Yes X	
Are Vegetation, Soil, or Hydro				ed, explain any answ	•		- 110
SUMMARY OF FINDINGS – Attach						ŕ	res, etc.
		1		·			
, , , ,		No	Is the Sampled A		. V N.		
Hydric Soil Present? Wetland Hydrology Present?		No	within a Wetland?	res	s <u>X</u> No	' —	
	Yes X	No					
Remarks: PUB wetland- a stagnant pool in wooded are bottles, tires abundant. Precipitation has bee indicator, and hydric soil indicator present.							
HYDROLOGY							
Wetland Hydrology Indicators:				Secondary In	•		required)
Primary Indicators (minimum of one is requir			(5.4.1)		Soil Cracks (B	•	(5.0)
X Surface Water (A1)		uatic Plants (Vegetated Co		.ce (B8)
High Water Table (A2)		en Sulfide Od			Patterns (B1		
X Saturation (A3) X Water Marks (B1)		ce of Reduce	es on Living Roots (0		m Lines (B16) son Water Tal		
Sediment Deposits (B2)			on in Tilled Soils (C6)		Burrows (C8)		
Drift Deposits (B3)		ıck Surface (, ,		n Visible on A		v (C9)
Algal Mat or Crust (B4)		Explain in Rei			or Stressed Pl		, ()
Iron Deposits (B5)		•	,		hic Position (` '	
Inundation Visible on Aerial Imagery (B7	·)				Aquitard (D3)	•	
Water-Stained Leaves (B9)				Microtopo	ographic Relie	ef (D4)	
Aquatic Fauna (B13)				FAC-Neu	ıtral Test (D5))	
Field Observations:							
Surface Water Present? Yes X	No	Depth (inche					
Water Table Present? Yes	No X No X	Depth (inche					
	No	Depth (inche	es): 0 We	tland Hydrology Pre	sent?	Yes X	No
(includes capillary fringe)	24 2 11			\ '' \ '' \ '' \ \ '' \ \ '' \ \ '' \ \ '' \ \ '' \ \ '' \ \ \ '' \ \ \ '' \ \ '' \ \ '' \ \ \ '' \ \ '' \ \ \ '' \ \ \ '' \ \ \ '' \ \ \ '' \ \ \ '' \ \ \ '' \ \ \ \ '' \ \ \ \ \ '' \ \ \ \ \ '' \ \ \ \ \ '' \ \ \ \ \ \ '' \			
Describe Recorded Data (stream gauge, mo	nitoring well,	aeriai photos	s, previous inspection	is), if available:			
Remarks:							
Multiple primary wetland hydrology indicators	s and one se	condary indic	ator present.				

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:
1. Diospyros virginiana	35	Yes	FAC	Number of Dominant Species
2. Platanus occidentalis	20	Yes	FACW	That Are OBL, FACW, or FAC: 4 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 5 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 80.0% (A/B)
7.				Prevalence Index worksheet:
··	55	=Total Cover		Total % Cover of: Multiply by:
FOO/ of total covers		of total cover:	4.4	
50% of total cover: 2	20%	or total cover.	11	
Sapling/Shrub Stratum (Plot size: 15' r)			= 4 0 1 1	FACW species 20 x 2 = 40
1. Rosa multiflora	10	Yes	FACU	FAC species45 x 3 =135
2. Diospyros virginiana	5	Yes	FAC	FACU species 10 x 4 = 40
3. Lindera benzoin	5	Yes	FAC	UPL species 0 x 5 = 0
4				Column Totals: 75 (A) 215 (B)
5.				Prevalence Index = B/A = 2.87
6.				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8.				X 2 - Dominance Test is >50%
9.				X 3 - Prevalence Index is ≤3.0 ¹
<u> </u>	20	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
500/ of total access 4			4	data in Remarks or on a separate sheet)
50% of total cover: 1	0 20%	of total cover:	4	, , , , , , , , , , , , , , , , , , ,
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)
1				¹ Indicators of hydric soil and wetland hydrology must
2				be present, unless disturbed or problematic.
3.				Definitions of Four Vegetation Strata:
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5.				more in diameter at breast height (DBH), regardless of
6.				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
				Herb – All herbaceous (non-woody) plants, regardless
10 11.				of size, and woody plants less than 3.28 ft tall.
		=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover:	20%	of total cover:		height.
Woody Vine Stratum (Plot size: 30' r)				
1.				
2.				
3.				
4				
5				Hydrophytic
		=Total Cover		Vegetation
50% of total cover:	20%	of total cover:		Present? Yes X No No
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

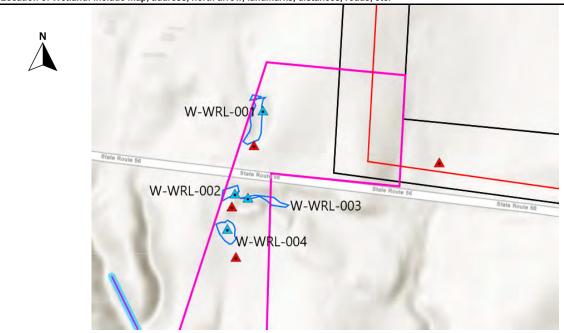
Sampling Point: W-WRL-002

SOIL Sampling Point: W-WRL-002

	ription: (Describe t	o the depth ne				ator or co	onfirm the abse	nce of indi	cators.)	
Depth	Matrix	0/ 0-		Featur	- 1	12	T		Damad	_
(inches)	Color (moist)	<u> </u>	olor (moist)	<u>%</u>	Type ¹	Loc ²	Texture		Remark	S
0-16	10YR 4/2	80 1	10YR 5/6	20	С	M	Loamy/Claye	y Pr	ominent redox co	oncentrations
¹ Type: C=Cc	oncentration, D=Deple	etion RM=Red	Luced Matrix M	 IS=Mas	ked San	d Grains	² l oc	ation: PI =	Pore Lining, M=N	latrix
Hydric Soil I		ouon, run–ruo	idood ividanx, iv	10-IVIGO	ntou Curi	a Oramo.			for Problematic	•
Histosol			Polyvalue Be	low Sur	face (S8	(MLRA			uck (A10) (MLRA	-
	ipedon (A2)		Thin Dark Su						Prairie Redox (A1	-
Black His			Loamy Muck	,	, ·		-		A 147, 148)	-,
	n Sulfide (A4)		Loamy Gleye	-			,		ont Floodplain Soi	ls (F19)
	Layers (A5)	X	Depleted Ma				-		A 136, 147)	` ,
	ck (A10) (LRR N)		Redox Dark	Surface	(F6)				rent Material (F2	1)
Depleted	Below Dark Surface	(A11)	Depleted Da	rk Surfa	ce (F7)		_	(outs	ide MLRA 127, 1	147, 148)
Thick Da	rk Surface (A12)	X	Redox Depre	essions	(F8)		_		nallow Dark Surfa	
	ucky Mineral (S1)		_Iron-Mangan		sses (F12	2) (LRR N	l, _	Other (Explain in Remar	ks)
	leyed Matrix (S4)		MLRA 136					•		
	edox (S5)		_Umbric Surfa						of hydrophytic ve	-
	Matrix (S6)		Piedmont Flo						hydrology must	-
Dark Sur	face (S7)		Red Parent N	<i>N</i> aterial	(F21) (M	LRA 127	, 147, 148)	unless	disturbed or prob	lematic.
Restrictive L	ayer (if observed):									
Type:										
Depth (in	ches):						Hydric Soil F	Present?	Yes_X	No
Remarks:										
Multiple prima	ary hydric soil indicat	ors present.								

Background Information					
B. Leopold and C.Wyse					
9/1/2022					
AECOM					
525 Vine St., Ste. 1800, Cincinnati, OH 45202					
859-640-5603					
Bill.Leopold@aecom.com					
W-WRL-002					
PUB					
DEPRESSION					

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate:	39.37937, -82.45200
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	Brushy Fork (HUC: 050901010203)
Site Visit:	9/1/2022
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-WRL-002		
Wetland Size (delineated acres):	0.03	Wetland Size (Estimated total acres):	0.03

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

N 🛮



Comments, Narrative Discussion, Justification of Category Changes:

PUB wetland- a stagnant pool in wooded area, potentially an old strip mine pit. The wetland boundary was delineated by watermarks on trees. Trash, bottles, tires abundant. Precipitation has been higher than average within the past 90 days. Wetland hydrology indicators, hydrophytic vegetation indicator, and hydric soil indicator present.

Final score:	41	Category:	Modified 2

Wetland ID:	W-WRL-002
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Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	Х	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	Х	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

Wetland ID: W-WRL-002

		T	
86	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the	YES	*NO
	cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status. Go to Question 9a	Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake	YES Go to Question 9b	*NO Go to Question 10
	Erie that is accessible to fish?	GO to Question au	GO to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the	YES	*NO
	loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 9c
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	*NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation	YES	NO
	communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland Go to Question 10	Go to Question 9e
9е	Does the wetland have a predominance of non-native or disturbance tolerant native plant	YES	NO
	species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton,	YES	*NO
	Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or	YES	*NO
	all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating
		l	l

Wetland ID: W-WRL-002

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

ite: AEP llesboro 1	138 kV Project Rater(s): B. Leopold and	d C.Wyse	Date: 9/1/2022
	,	•	J. 1. 2022
		Field ID:	
0.0	Metric 1. Wetland Area (size).	W-WRL-002	
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)	Delineated acres:	0.03
	3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts)	Total acres:	0.03
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)		
х	<0.1 acres (0.04ha) (0 pts)		
9.0 9.0	Metric 2. Upland buffers and surround	ing land use.	
: 14 pts. subtotal	2a. Calculate average buffer width. Select only one and as	J	
	WIDE. Buffers average 50m (164ft) or more around wetland p	perimeter (7)	
х	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around NARROW. Buffers average 10m to <25m (32ft to <82ft) around		
	VERY NARROW. Buffers average <10m (<32ft) around wetla		
	2b. Intensity of surrounding land use. Select one or doub	_	
X	VERY LOW. 2nd growth or older forest, prairie, savannah, will LOW. Old field (>10 years), shrubland, young second growth		
х	MODERATELY HIGH. Residential, fenced pasture, park, cons		
	HIGH. Urban, industrial, open pasture, row cropping, mining,	construction. (1)	
15.0 24.0	Metric 3. Hydrology.		
30 pts. subtotal	3a. Sources of Water. Score all that apply.	3b. Connectivity. Score all t	that apply.
	High pH groundwater (5)	100 year floodplain (1)	
x	Other groundwater (3) Precipitation (1)	Between stream/lake and oth x Part of wetland/upland (e.g. for	
	Seasonal/Intermittent surface water (3)	Part of riparian or upland corr	idor (1) curation. Score one or dbl check.
	Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one.	x Semi- to permanently inundation	
	>0.7 (27.6in) (3)	Regularly inundated/saturated	
X	0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1)	Seasonally inundated (2) Seasonally saturated in uppe	r 30cm (12in) (1)
_	3e. Modifications to natural hydrologic regime. Score one	or double check and average.	
x	None or none apparent (12) Recovered (7)	Check all disturbances obs	point source (nonstormwater)
	Recovering (3)	tile	filling/grading
	Recent or no recovery (1)	x dike weir	road bed/RR track x dredging
		stormwater input	Other:
11.0 35.0	Metric 4. Habitat Alteration and Develo	pment.	
20 pts. subtotal	4a. Substrate disturbance. Score one or double check and	d average.	
	None or none apparent (4) Recovered (3)		
	Recovering (2)		
	Recent or no recovery (1) 4b. Habitat development. Select only one and assign scor	re	
	Excellent (7)		
 	Very good (6) Good (5)		
	Moderately good (4)		
X	Fair (3) Poor to fair (2)		
	Poor (1)		
	4c. Habitat alteration. Score one or double check and ave	rage. Check all disturbances obser	ved
X	Recovered (6)	mowing	shrub/sapling removal
 	Recovering (3) Recent or no recovery (1)	grazing x clearcutting	herbaceous/aquatic bed removal sedimentation
		selective cutting	x dredging
		woody debris removal toxic pollutants	farming nutrient enrichment
35.0			
subtotal this page	ORAM v. 5.0 Field Form Quantitative Rating		

W-WRL-002-ORAM.xlsx | Quantitative Form

Wetland ID:		W-WRI -002	W-WRL-002						
TTELIA	. ועו וט	**-***********************************							
Site:	AEP Ilest	ooro 138 kV Project	Rater(s):	B.	Leopold and C.Wyse	Date:	9/1/2022		
					Field ID:				
	35.0	7			W-WRL-002				
	subtotal this page	ני			**-***********************************				
	subtotal this page								
0	.0 35.0	Metric 5. Special We	tlands.						
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 wetlar Lake Erie coastal/tributary wetlar		10)					
		Lake Plain Sand Prairies (Oak O							
		Relict Wet Praires (10)							
		Known occurrence state/federal Significant migratory songbird/wa			(10)				
		Category 1 Wetland. See Questi							
6	.0 41.0	Metric 6. Plant comn	nunities, interspe	rsior	i, microtopography.				
max 20pts.	subtotal	6a. Wetland Vegetation 0	Communities.		Vegetation Community (Cover Scale			
		Score all present using 0 to 3 sc	ale.	0	Absent or comprises <0.1ha (0.24				
		Aquatic bed Emergent		1	Present and either comprises sma vegetation and is of moderate qua				
		0 Shrub			significant part but is of low quality				
		0 Forest		2	Present and either comprises sign	nificant part of wetland's 2			
		Mudflats			vegetation and is of moderate qua	ality or comprises a small			
		1 Open water Other		3	part and is of high quality Present and comprises significant	nart or more of wetland's 3			
		6b. horizontal (plan view) Inter	spersion.	J	vegetation and is of high quality	part, or more, or wellands o			
		Select only one.			No. of Branches and American	e			
		High (5) Moderately high(4)			Narrative Description of Vegeta Low spp diversity and/or predomin				
		Moderate (3)			disturbance tolerant native specie	S			
		x Moderately low (2)			Native spp are dominant component				
		Low (1) None (0)			although nonnative and/or disturb can also be present, and species				
		6c. Coverage of invasive plant	s. Refer		moderately high, but generallyw/o				
		Table 1 ORAM long form for list.	Add		threatened or endangered spp to				
		or deduct points for coverage Extensive >75% cover (-5)			A predominance of native species and/or disturbance tolerant native				
		Moderate 25-75% cover (-3)			absent, and high spp diversity and				
		Sparse 5-25% cover (-1)			the presence of rare, threatened,				
		Nearly absent <5% cover (0)							
		Absent (1) 6d. Microtopography.		0	Mudflat and Open Water Class Absent <0.1ha (0.247 acres)	Quality			
		Score all present using 0 to 3 sc	ale.		Low 0.1 to <1ha (0.247 to 2.47 ac	res)			
		Vegetated hummucks/tussucks			Moderate 1 to <4ha (2.47 to 9.88	acres)			
		Coarse woody debris >15cm (6ir Standing dead >25cm (10in) dbr		3	High 4ha (9.88 acres) or more				
		Standing dead >25cm (10in) dbr Amphibian breeding pools	ļ		Microtopography Cover Scale				
				0	Absent				
				1	Present very small amounts or if r of marginal quality	nore common			
				2	Present in moderate amounts, bu	not of highest			
	41.0	TOTAL (Max 100 pts)			quality or in small amounts of high				
	Modified 2			3	Present in moderate or greater ar				
	camea z			3					
					and of highest quality				

W-WRL-002-ORAM.xlsx | Quantitative Form 9/26/2022

Wetland ID: W-WRL-002

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	(0	
	Metric 2. Buffers and surrounding land use	9	9	
	Metric 3. Hydrology	1	.5	
	Metric 4. Habitat	1	1	
	Metric 5. Special Wetland Communities	(0	
	Metric 6. Plant communities, interspersion, microtopography	(6	
	TOTAL SCORE	4	1	Category based on score breakpoints Modified 2

Complete Wetland Categorization Worksheet.

Wetland ID:	W-WRL-002
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	*NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	*YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria		Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determine the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
	•		-
		Final Cate	ory



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-002

Date:

September 1, 2022

Description:

PUB

Category 2

Facing North



Wetland W-WRL-002

Date:

September 1, 2022

Description:

PUB

Category 2

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-002

Date:

September 1, 2022

Description:

PUB

Category 2

Facing South



Wetland W-WRL-002

Date:

September 1, 2022

Description:

PUB

Category 2

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-002

Date:

September 1, 2022

Description:

PUB

Category 2

Soils



U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project	City/Count	y: Vinton	Sampling Date: 9/1/22			
Applicant/Owner: AEP		State: OH	Sampling Point: W-WRL-002-003-UPL			
Investigator(s): WRL, CRW	Section, Towns	ship, Range: S3 T12N R17W	_			
Landform (hillside, terrace, etc.): Undulating		ave, convex, none): Convex	Slope (%): 10			
Subregion (LRR or MLRA): LRR N	Lat: 39.37927	Long: -82.45203	Datum: WGS84			
Soil Map Unit Name: SbE: Sewell channery fine			cation: None			
Are climatic / hydrologic conditions on the site type		Yes No X (If no	o, explain in Remarks.)			
Are Vegetation , Soil , or Hydrology	•	re "Normal Circumstances" preser				
		·				
Are Vegetation, Soil, or Hydrology		needed, explain any answers in				
SUMMARY OF FINDINGS – Attach si	te map snowing sampling po	int locations, transects, i	mportant teatures, etc.			
Hydrophytic Vegetation Present? Yes	s X No Is the Sample	ed Area				
Hydric Soil Present? Yes	s No X within a Wet	land? Yes	NoX			
Wetland Hydrology Present? Yes	s No X					
Remarks: Upland point associated with wetlands W-WRL- present, but lacking hydric soil and wetland hyd	•		, ,			
HYDROLOGY		Considerate disease				
Wetland Hydrology Indicators:	ah a ah all that awah A	<u> </u>	rs (minimum of two required)			
Primary Indicators (minimum of one is required;		Surface Soil Cra	, ,			
Surface Water (A1)	True Aquatic Plants (B14)					
High Water Table (A2) Saturation (A3)	_ Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Ro					
Water Marks (B1)	Presence of Reduced Iron (C4)					
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils	· · · · · · · · · · · · · · · · · · ·				
Drift Deposits (B3)	Thin Muck Surface (C7)	• • • • • • • • • • • • • • • • • • • •				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	<u> </u>				
Iron Deposits (B5)	_	Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitar	rd (D3)			
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral Te	est (D5)			
Field Observations:						
Surface Water Present? Yes No	D X Depth (inches): D X Depth (inches):					
Water Table Present? Yes No	Depth (inches):					
Saturation Present? Yes No	Depth (inches):	Wetland Hydrology Present?	Yes No _X_			
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previous insp	ections), if available:				
Remarks: No wetland hydrology indicators present.						

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:
Liriodendron tulipifera	50	Yes	FACU	Number of Dominant Species
2. Acer saccharinum	25	Yes	FACW	That Are OBL, FACW, or FAC:3(A)
3. Carya ovata	10	No	FACU	Total Number of Dominant
4.				Species Across All Strata: 5 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 60.0% (A/B)
7.				Prevalence Index worksheet:
· ·	85 =	Total Cover		Total % Cover of: Multiply by:
50% of total cover:		of total cover:	17	OBL species 0 x 1 = 0
	43 20%	or total cover.		
Sapling/Shrub Stratum (Plot size: 15' r)		E40	·
1. Diospyros virginiana	15	Yes	FAC	FAC species 90 x 3 = 270
2. Elaeagnus umbellata	10	Yes	UPL	FACU species 71 x 4 = 284
3. Cornus florida	5	No	FACU	UPL species 10 x 5 = 50
4. Quercus rubra	3	No	FACU	Column Totals: 201 (A) 664 (B)
5. Rosa multiflora	3	No	FACU	Prevalence Index = B/A = 3.30
6.				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8.				X 2 - Dominance Test is >50%
9.				3 - Prevalence Index is ≤3.0 ¹
	36 =	Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
E00/ of total agreement			0	data in Remarks or on a separate sheet)
	18 20%	of total cover:	8	' '
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)
Lycopodium clavatum	65	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must
2. Diospyros virginiana	10	No	FAC	be present, unless disturbed or problematic.
3. Betula nigra	5	No	FACW	Definitions of Four Vegetation Strata:
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of
6.				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
· · · · · · · · · · · · · · · · · · ·		T-1-1-0		
500/ / / /		=Total Cover	4.0	Woody Vine – All woody vines greater than 3.28 ft in height.
	40 20%	of total cover:	16	neight.
Woody Vine Stratum (Plot size: 30' r)				
1				
2				
3				
4.		<u></u>		
5.				
		=Total Cover		Hydrophytic
50% of total cover:		of total cover:		Vegetation Present? Yes X No
		o. total 00V51.		Present?
Remarks: (Include photo numbers here or on a sep	arate sheet.)			
Hydrophytic vegetation indicator present.				

Sampling Point: w-wrl-002-003-UPL

SOIL Sampling Point: w-wrl-002-003-UPL

		o the dept				ator or co	onfirm the absence o	of indicators.)	
Depth	Matrix			x Featur					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rem	arks
0-6	7.5YR 5/4	100					Loamy/Clayey		
6-16	7.5YR 6/4	70	7.5YR 6/2	30	D	М	Loamy/Clayey		
							<u>, , , , , , , , , , , , , , , , , , , </u>		
			_						
¹ Type: C=C	oncentration, D=Deple	etion. RM=	Reduced Matrix. N	MS=Mas	ked San	d Grains.	² Location:	PL=Pore Lining, M	=Matrix.
Hydric Soil						<u> </u>		ators for Problema	•
Histosol	(A1)		Polyvalue Be	elow Sur	face (S8) (MLRA	147, 148) 2	cm Muck (A10) (ML	.RA 147)
	oipedon (A2)		Thin Dark S					oast Prairie Redox (
	istic (A3)		Loamy Muck					(MLRA 147, 148)	,
	en Sulfide (A4)		Loamy Gley	-				iedmont Floodplain	Soils (F19)
	d Layers (A5)		Depleted Ma					(MLRA 136, 147)	(-,
	uck (A10) (LRR N)		Redox Dark	` '			R	ed Parent Material (F21)
	d Below Dark Surface	(A11)	Depleted Da		` '		 ``	(outside MLRA 12	
	ark Surface (A12)	(****)	Redox Depre		. ,		V	ery Shallow Dark Su	
	Mucky Mineral (S1)		Iron-Mangar			2) (LRR N		ther (Explain in Ren	
	Gleyed Matrix (S4)		MLRA 130		(-, (· —	(=	,
	Redox (S5)		Umbric Surfa) (MLRA	122. 136	3Indica	ators of hydrophytic	vegetation and
	Matrix (S6)		Piedmont Fl					retland hydrology mu	-
	rface (S7)		Red Parent					nless disturbed or pr	
			RCGT archi	viateriai	(1 2 1) (10	LIVA 121	, 147, 140 <i>)</i> ui	The 33 disturbed of pr	obicinatic.
	Layer (if observed):								
Type:								10 11	N V
Depth (i	ncnes):						Hydric Soil Presei	nt? Yes	NoX
Remarks:									
No hydric so	il indicators present.								

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project	City/County: Vinton		Sampling Date: 9/1/22			
Applicant/Owner: AEP			Sampling Point:			
Investigator(s): WRL, CRW	Section, Township, Range: S	3 T12N R17W	_			
Landform (hillside, terrace, etc.): Depression	Local relief (concave, convex, no		Slope (%):	1		
Subregion (LRR or MLRA): LRR N Lat: 39	·	-		WGS84		
Soil Map Unit Name: SbE: Sewell channery fine sandy loa		NWI classification	n: None			
Are climatic / hydrologic conditions on the site typical for th				`		
, ,	<u> </u>		xplain in Remarks			
Are Vegetation, Soil, or Hydrologysi		umstances" present?	Yes X	NO		
Are Vegetation, Soil, or Hydrologyna		in any answers in Ren	,			
SUMMARY OF FINDINGS – Attach site map	showing sampling point location	ıs, transects, imp	ortant featur	es, etc.		
Hydrophytic Vegetation Present? Yes X	No Is the Sampled Area					
Hydric Soil Present? Yes X	No within a Wetland?	Yes X	No			
Wetland Hydrology Present? Yes X	No					
Remarks: PFO wetland- potentially an old strip mine pit. Evidence o Precipitation has been higher than average within the pas indicators present.	3	,	, , ,	, ,		
HYDROLOGY						
Wetland Hydrology Indicators:	<u> </u>	econdary Indicators (n	minimum of two re	equired)		
Primary Indicators (minimum of one is required; check all	hat apply)	Surface Soil Cracks	s (B6)			
		X Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)				
 · · · · · · ·	n Sulfide Odor (C1)					
	I Rhizospheres on Living Roots (C3)	Moss Trim Lines (B16)				
· · · · · · · · · · · · · · · · · · ·	e of Reduced Iron (C4)	Dry-Season Water Table (C2)				
	ron Reduction in Tilled Soils (C6)					
	ck Surface (C7)					
X Iron Deposits (B5)	xplain in Remarks)	Stunted or Stressed Plants (D1)X Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)	<u></u> -	Shallow Aquitard (D3)				
X Water-Stained Leaves (B9)	_	Microtopographic Relief (D4)				
Aquatic Fauna (B13)	-	X FAC-Neutral Test (
Field Observations:			,			
Surface Water Present? Yes X No	Depth (inches): 2					
Water Table Present? Yes X No No	Depth (inches): 10					
Saturation Present? Yes X No	Depth (inches): 0 Wetland Hy	drology Present?	Yes X	No		
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspections), if avai	lable:				
Remarks:						
Multiple primary and secondary wetland hydrology indicat	ors present.					
manuple primary and eccentary french from the first transfer	7.6 p. 666. m					

VEGETATION (Four Strata) – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Platanus occidentalis	20	Yes	FACW	
				Number of Dominant Species That Are ORL FACW or FAC:
2. Acer saccharinum	10	Yes	FACW	That Are OBL, FACW, or FAC:6 (A)
3. Quercus bicolor	5	No	FACW	Total Number of Dominant
4				Species Across All Strata: 6 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC:100.0% (A/B)
7				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 18	3 20%	of total cover:	7	OBL species 2 x 1 = 2
Sapling/Shrub Stratum (Plot size: 15' r)				FACW species 50 x 2 = 100
1. Fraxinus pennsylvanica	5	Yes	FACW	FAC species 15 x 3 = 45
2. Diospyros virginiana	5	Yes	FAC	FACU species 0 x 4 = 0
3.				UPL species 0 x 5 = 0
4				Column Totals: 67 (A) 147 (B)
5.		·		Prevalence Index = B/A = 2.19
6.		·		Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8.				X 2 - Dominance Test is >50%
9.				X 3 - Prevalence Index is ≤3.0 ¹
	10	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 5		of total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5' r)		or total cover.		Problematic Hydrophytic Vegetation ¹ (Explain)
Boehmeria cylindrica	10	Yes	FACW	
Lycopodium clavatum	10	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	2	No	OBL	·
Lycopus americanus 4.		INO	OBL	Definitions of Four Vegetation Strata:
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
5.				height.
6.				
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9.				` ,
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
	22	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 12	1 20%	of total cover:	5	height.
Woody Vine Stratum (Plot size: 30' r)				
1				
2.				
3.		·		
4.		·		
5.		·		Hudaan kudia
		=Total Cover		Hydrophytic Vegetation
50% of total cover:	20%	of total cover:		Present? Yes X No
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

Sampling Point: W-WRL-003

SOIL Sampling Point: W-WRL-003

	ription: (Describe t	to the dep				ator or c	onfirm the absence	of indicators.)	
Depth (inches)	Matrix	%		k Featur	-	Loc ²	Toyturo	Remarks	
(inches) 0-4	Color (moist) 10YR 3/2	80	Color (moist) 10YR 3/6	20	Type ¹ C	M	Texture Loamy/Clayey	Prominent redox concentra	otions
4-16	10YR 5/1	60	7.5YR 4/4	40	<u>C</u>	<u>M</u>	Loamy/Clayey	Prominent redox concentra	ations
								-	
								-	
			_						_
¹Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, N	1S=Mas	ked San	d Grains.	² Location	n: PL=Pore Lining, M=Matrix.	
Hydric Soil I								cators for Problematic Hydric	: Soils³:
Histosol	(A1)		Polyvalue Be	low Su	rface (S8) (MLRA	147, 148)	2 cm Muck (A10) (MLRA 147)	
Histic Ep	ipedon (A2)		Thin Dark Su	ırface (S	89) (MLR	A 147, 1	48)	Coast Prairie Redox (A16)	
Black His	stic (A3)		Loamy Muck	y Miner	al (F1) (N	ILRA 13	6)	(MLRA 147, 148)	
Hydrogei	n Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)			Piedmont Floodplain Soils (F19))
Stratified	Layers (A5)		X Depleted Ma	trix (F3))			(MLRA 136, 147)	
2 cm Mu	ck (A10) (LRR N)		X Redox Dark	Surface	(F6)			Red Parent Material (F21)	
Depleted	Below Dark Surface	(A11)	Depleted Da	rk Surfa	ice (F7)			(outside MLRA 127, 147, 14	
	rk Surface (A12)		Redox Depre					Very Shallow Dark Surface (F22	2)
	ucky Mineral (S1)		Iron-Mangan		sses (F1	2) (LRR I	N,	Other (Explain in Remarks)	
	leyed Matrix (S4)		MLRA 136				2		
	edox (S5)		Umbric Surfa					cators of hydrophytic vegetation	
	Matrix (S6)		Piedmont Flo					wetland hydrology must be pres	
Dark Sur	face (S7)		Red Parent N	<i>M</i> aterial	(F21) (M	LRA 127	, 147, 148)	unless disturbed or problematic	;.
Restrictive L	ayer (if observed):								
Type:									
Depth (in	nches):						Hydric Soil Pres	ent? Yes <u>X</u> No_	
Remarks:									
Hydric soil in	dicators present. Coa	al fines wit	nin the first four inc	hes.					

Background Information					
Name:	B. Leopold and C.Wyse				
Date:	9/1/2022				
Affiliation:	AECOM				
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202				
Phone Number:	859-640-5603				
e-mail address:	Bill.Leopold@aecom.com				
Name of Wetland:	W-WRL-003				
Vegetation Communit(ies):	PFO				
HGM Class(es):	DEPRESSION				

W-WRL-001

W-WRL-002

W-WRL-003

State Route 56

W-WRL-004

Lat/Long or UTM Coordinate:	39.37934, -82.45186
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 712N R17W
Hydrologic Unit Code:	Brushy Fork (HUC: 050901010203)
Site Visit:	9/1/2022
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-WRL-003					
Wetland Size (delineated acres):	0.03 Wetland Size (Estimated total acres): 0.03					

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

N 🛕



Comments, Narrative Discussion, Justification of Category Changes:

PFO wetland- potentially an old strip mine pit. Evidence of acid mine drainage into wetland. The wetland boundary was delineated by topography. Precipitation has been higher than average within the past 30 days. Wetland hydrology indicators, hydrophytic vegetation indicators, and hydric soil indicators present.

Final score: 44 Category: Modified 2

Wetland ID:	W-WRL-003
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Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	Х	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	Х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	Х	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

9a	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh? Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a YES Go to Question 9b	*NO Go to Question 9a *NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	*NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	*NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	*NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	*NO Complete Quantitative Rating

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

/etland ID: W-WRL-003		
e: AEP llesboro 138 kV Project Rater(s): B. Leopolo	I and C.Wyse	Date: 9/1/2022
		•
	Field ID:	
0.0 0.0 Metric 1. Wetland Area (size).	W-WRL-003	
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)	Delineated acres:	0.03
10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts)		
0.3 to <3 acres (0.12 to <1.2ha) (2pts)	Total acres:	0.03
0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) x <0.1 acres (0.04ha) (0 pts)		
9.0 9.0 Metric 2. Upland buffers and surrou	ındina land usa	
pts. subtotal 2a. Calculate average buffer width. Select only one a	· ·	
WIDE. Buffers average 50m (164ft) or more around wetl	and perimeter (7)	
x MEDIUM. Buffers average 25m to <50m (82 to <164ft) a NARROW. Buffers average 10m to <25m (32ft to <82ft)		
VERY NARROW. Buffers average <10m (<32ft) around		
2b. Intensity of surrounding land use. Select one or x VERY LOW. 2nd growth or older forest, prairie, savanna		
LOW. Old field (>10 years), shrubland, young second gr	owth forest. (5)	
x MODERATELY HIGH. Residential, fenced pasture, park HIGH. Urban, industrial, open pasture, row cropping, mi		
Thorn. Orban, madathar, open pasture, row cropping, mil	ming, construction. (1)	
17.0 26.0 Metric 3. Hydrology.		
pts. subtotal 3a. Sources of Water. Score all that apply.	3b. Connectivity. Score all t	hat apply.
High pH groundwater (5) x Other groundwater (3)	100 year floodplain (1) Between stream/lake and other	er human use (1)
x Precipitation (1)	x Part of wetland/upland (e.g. fo	prest), complex (1)
Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5)	Part of riparian or upland corri 3d. Duration inundation/satu	dor (1) uration. Score one or dbl check.
3c. Maximum water depth. Select one.	Semi- to permanently inundate	
>0.7 (27.6in) (3) x 0.4 to 0.7m (15.7 to 27.6in) (2)	x Regularly inundated/saturated Seasonally inundated (2)	
<0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Scor	Seasonally saturated in upper	30cm (12in) (1)
None or none apparent (12)	Check all disturbances obse	
x Recovered (7) Recovering (3)	ditch tile	point source (nonstormwater) filling/grading
Recent or no recovery (1)	x dike	road bed/RR track
	weir stormwater input	x dredging Other:
11.0 37.0 Metric 4. Habitat Alteration and Dev	rolonment	
pts. subtotal 4a. Substrate disturbance. Score one or double chec	•	
None or none apparent (4)	-	
x Recovered (3) Recovering (2)		
Recent or no recovery (1) 4b. Habitat development. Select only one and assign	1 SCOTE	
Excellent (7)	i score.	
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 an	d average	
None or none apparent (9)	Check all disturbances observ	
x Recovered (6) Recovering (3)	mowing grazing	shrub/sapling removal herbaceous/aquatic bed removal
Recent or no recovery (1)	x clearcutting	sedimentation
	woody debris removal	x dredging farming
	toxic pollutants	nutrient enrichment
37.0		
subtotal this page ORAM v. 5.0 Field Form Quantitative Rating		

Wetla	nd ID:	W-WRL-003					

Site:	AEP Ilest	ooro 138 kV Project	Rater(s):	B.	Leopold and C.Wyse	Date:	9/1/2022
		-			Field ID:		
	37.0				W-WRL-003		
	subtotal this page						
	0 0 27 0	Motrio E Chaolal Wa	tlanda				
	0.0 37.0	•					
max 10 pts.	subtotal	Check all that apply and Bog (10)	score as indicated.				
		Fen (10)					
		Old growth forest (10)					
		Mature forested wetland (5) Lake Erie coastal/tributary wetlar	nd-unrestricted hydrology (10)			
		Lake Erie coastal/tributary wetlar	nd-restricted hydrology (5)	-,			
		Lake Plain Sand Prairies (Oak O Relict Wet Praires (10)	penings) (10)				
		Known occurrence state/federal	threatened or endangered	species	(10)		
		Significant migratory songbird/wa					
		Category 1 Wetland. See Questi	on 5 Qualitative Rating (-10	0)			
7	7.0 44.0	Metric 6. Plant comm	nunities, interspe	ersion	ı. microtopography.		
max 20pts.	subtotal	6a. Wetland Vegetation C	•		Vegetation Community	Cover Scale	
		Score all present using 0 to 3 sca		0	Absent or comprises <0.1ha (0.24		
		Aquatic bed		1	Present and either comprises sm		
		0 Emergent 0 Shrub			vegetation and is of moderate qui significant part but is of low qualit		
		1 Forest		2	Present and either comprises sign	nificant part of wetland's 2	
		Mudflats Open water			vegetation and is of moderate quant and is of high quality	ality or comprises a small	
		Other		3	Present and comprises significan	t part, or more, of wetland's 3	
		6b. horizontal (plan view) Inter	spersion.		vegetation and is of high quality		
		Select only one. High (5)			Narrative Description of Vegeta	ation Quality	
		Moderately high(4)			Low spp diversity and/or predomi	nance of nonnative or low	
		Moderate (3) x Moderately low (2)			disturbance tolerant native specie Native spp are dominant compon		
		Low (1)			although nonnative and/or disturb		
		None (0)			can also be present, and species		
		6c. Coverage of invasive plants Table 1 ORAM long form for list.			moderately high, but generallyw/o threatened or endangered spp to		
		or deduct points for coverage			A predominance of native species	s, with nonnative spp high	
		Extensive >75% cover (-5) Moderate 25-75% cover (-3)			and/or disturbance tolerant native absent, and high spp diversity an		
		Sparse 5-25% cover (-1)			the presence of rare, threatened,		
		Nearly absent <5% cover (0)			M . 15. 1 1	0 -19	
		X Absent (1) 6d. Microtopography.		0	Mudflat and Open Water Class Absent <0.1ha (0.247 acres)	Quality	
		Score all present using 0 to 3 sca	ale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac		
		Vegetated hummucks/tussucks Coarse woody debris >15cm (6ir)	N		Moderate 1 to <4ha (2.47 to 9.88 High 4ha (9.88 acres) or more	acres)	
		0 Standing dead >25cm (10in) dbh		3	Inight 4tha (5.00 acres) of thore		
		1 Amphibian breeding pools		^	Microtopography Cover Scale		
				<u>0</u>	Absent Present very small amounts or if	more common	
					of marginal quality		
	44.0	TOTAL (Man 400 m/m)		2	Present in moderate amounts, but		
		TOTAL (Max 100 pts)			quality or in small amounts of hig		
	Modified 2	Category		3	Present in moderate or greater ar	mounts	
					and of highest quality		

W-WRL-003-ORAM.xlsx / Quantitative Form 9/26/2022

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	(0	
	Metric 2. Buffers and surrounding land use	9	9	
	Metric 3. Hydrology	1	.7	
	Metric 4. Habitat	1	1	
	Metric 5. Special Wetland Communities	(0	
	Metric 6. Plant communities, interspersion, microtopography	,	7	
	TOTAL SCORE	4	4	Category based on score breakpoints Modified 2

 $Complete\ Wetland\ Categorization\ Worksheet.$

Wetland ID:	W-WRL-003
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	*NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	*YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria		Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determine the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
	•		-
		Final Cate	ory



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-003

Date:

September 1, 2022

Description:

PFO

Category 2

Facing North



Wetland W-WRL-003

Date:

September 1, 2022

Description:

PFO

Category 2

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-003

Date:

September 1, 2022

Description:

PFO

Category 2

Facing South



Wetland W-WRL-003

Date:

September 1, 2022

Description:

PFO

Category 2

Facing West





PHOTOGRAPHIC RECORD

WETLANDS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-003

Date:

September 1, 2022

Description:

PFO

Category 2

Soil Pit



U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project		City/County: Vinton		_Sampling Date:	9/1/22
Applicant/Owner: AEP			State: OH	Sampling Point:	W-WRL-004
Investigator(s): WRL, CRW		Section, Township, Range:	S3 T12N R17W	_	
Landform (hillside, terrace, etc.): Hillslope	Lo	ocal relief (concave, convex, ı		Slope (%):	10
Subregion (LRR or MLRA): LRR N	Lat: 39.37909		32.45208	Datum:	WGS84
Soil Map Unit Name: SbE: Sewell channery			NWI classifica		
Are climatic / hydrologic conditions on the site	e typical for this time of ye	ear? Yes	No X (If no, e	explain in Remark	s.)
Are Vegetation , Soil , or Hydro			rcumstances" present?		
Are Vegetation, Soil, or Hydro			lain any answers in Re		
SUMMARY OF FINDINGS – Attach	<u> </u>		-		res, etc.
The departs of a Venezation Research	Y Y N-				
Hydrophytic Vegetation Present?	Yes X No No	Is the Sampled Area	Vaa V	Na	
Hydric Soil Present? Wetland Hydrology Present?	Yes X No No	within a Wetland?	Yes X	No	
Remarks:	Tes X NO				
PFO wetland downslope of wetlands W-WR been higher than average within the past 30					
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two	required)
Primary Indicators (minimum of one is requi			Surface Soil Crac	, ,	
Surface Water (A1)	True Aquatic Plants		Sparsely Vegetate		ce (B8)
High Water Table (A2)	Hydrogen Sulfide O		Drainage Patterns		
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines (
Water Marks (B1)	Presence of Reduce		Dry-Season Wate		
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows		, (CO)
Drift Deposits (B3)	Thin Muck Surface (Saturation Visible		/ (C9)
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Re	emarks)	X Geomorphic Posit		
Inundation Visible on Aerial Imagery (B7	7)		Shallow Aquitard		
X Water-Stained Leaves (B9)	,		Microtopographic		
Aquatic Fauna (B13)			X FAC-Neutral Test		
Field Observations:					
Surface Water Present? Yes	No X Depth (inch	nes):			
Water Table Present? Yes					
Saturation Present? Yes	No X Depth (inch		lydrology Present?	Yes X	No
(includes capillary fringe)					
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photo	s, previous inspections), if av	vailable:		
Remarks:					
One primary and two secondary wetland hyd	drology indicators are pre-	sent.			

VEGETATION (Four Strata) – Use scientific names of plants.

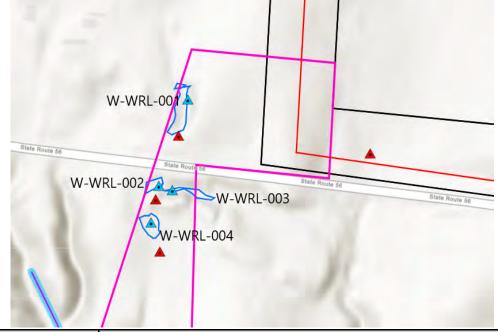
Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Total % Cover of: Total % Cover of: Multiply by: OBL species 123
That Are OBL, FACW, or FAC: 6 (A) Total Number of Dominant Species Across All Strata: 6 (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 123 x 2 = 246 FAC species 90 x 3 = 270 FACU species 15 x 4 = 60 UPL species 0 x 5 = 0 Column Totals: 228 (A) 576 (B) Prevalence Index = B/A = 2.53 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must
Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Total % Cover of: Multiply by: OBL species FACW species 123 X 2 = 246 FAC species 90 X 3 = 270 FACU species 15 X 4 = 60 UPL species 0 Column Totals: 228 (A) 576 (B) Prevalence Index = B/A = 2.53 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must
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Definitions of Four Vegetation Strata:
Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
more in diameter at breast height (DBH), regardless of
height.
Sapling/Shrub – Woody plants, excluding vines, less
than 3 in. DBH and greater than or equal to 3.28 ft
(1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless
of size, and woody plants less than 3.28 ft tall.
Mondy Vina All woody vines greater than 2.29 ft in
Woody Vine – All woody vines greater than 3.28 ft in height.
Hydrophytic
Vegetation
Present? Yes X No
۷

Sampling Point: W-WRL-004

SOIL Sampling Point: W-WRL-004

		to the dep				ator or co	onfirm the absence	of indicators.)			
Depth	Matrix			Featu	_	12	Taratana	Damada			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks			
0-3	10YR 4/2	50	10YR 5/6	50	<u>C</u>	<u>M</u>	Loamy/Clayey	Prominent redox concentrations	<u> </u>		
3-15	10YR 6/2	80	10YR 4/6	20	<u>C</u>	PL/M	Loamy/Clayey	Prominent redox concentrations	<u>s</u>		
¹ Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, N	 1S=Mas	ked San	d Grains.	2Location	: PL=Pore Lining, M=Matrix.			
Hydric Soil I		•	,					cators for Problematic Hydric Soil	s³:		
Histosol			Polyvalue Be	low Su	rface (S8	(MLRA		2 cm Muck (A10) (MLRA 147)			
	ipedon (A2)		Thin Dark Su					Coast Prairie Redox (A16)			
Black His			Loamy Muck					(MLRA 147, 148)			
	n Sulfide (A4)		Loamy Gleye					Piedmont Floodplain Soils (F19)			
	Layers (A5)		X Depleted Ma		. ,			(MLRA 136, 147)			
	ck (A10) (LRR N)		Redox Dark	` '			ı	Red Parent Material (F21)			
	Below Dark Surface	(A11)	Depleted Da				<u>—</u>	(outside MLRA 127, 147, 148)			
	rk Surface (A12)	()		Redox Depressions (F8) Very Shallow Dark Surface (F22)							
	ucky Mineral (S1)		Iron-Mangan			2) (LRR I					
	leyed Matrix (S4)			MLRA 136)							
	edox (S5)		Umbric Surfa		3) (MLRA	122, 13	3Indi	³ Indicators of hydrophytic vegetation and			
	Matrix (S6)		Piedmont Flo					wetland hydrology must be present,			
	face (S7)		Red Parent N					unless disturbed or problematic.			
	ayer (if observed):				(· – · / (· ·		, , ,				
Type:	,										
Depth (in	iches):						Hydric Soil Prese	ent? Yes X No			
Remarks:							<u> </u>				
	licator present.										
,											

Background Information				
Name:	B. Leopold and C.Wyse			
Date:	9/1/2022			
Affiliation:	AECOM			
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202			
Phone Number:	859-640-5603			
e-mail address:	Bill.Leopold@aecom.com			
Name of Wetland:	W-WRL-004			
Vegetation Communit(ies):	PFO			
HGM Class(es):	DEPRESSION			
Location of Wetland: include map	, address, north arrow, landmarks, distances, roads, etc.			



Lat/Long or UTM Coordinate:	39.37909, -82.45208
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	Brushy Fork (HUC: 050901010203)
Site Visit:	9/1/2022
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-WRL-004				
Wetland Size (delineated acres):	0.06	Wetland Size (Estimated total acres):	0.06		

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

PFO wetland downslope of wetlands W-WRL-002 and W-WRL-003. The wetland boundary was delineated by vegetation and soils. Precipitation has been higher than average within the past 30 days. Wetland hydrology indicators, hydrophytic vegetation indicators, and hydric soil indicator present.

Final score:	46	Category:	2

Wetland ID:	W-WRL-004
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Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	Х	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	Х	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the	VEC	wa.co
θĐ	cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	*NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	*NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	*NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	*NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	*NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	*NO Complete Quantitative Rating

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Field ID: W-WRL-004 Delineated acres:	Date: 9/1/2022
W-WRL-004	
Delineated acres:	
Delineated acres:	
Delineated acres:	
	0.06
Total acres:	0.06
inding land use.	
and perimeter (7) round wetland perimeter (4; around wetland perimeter (1) wetland perimeter (0) fouble check and average. h, wildlife area, etc. (7) bowth forest. (5) conservation tillage, new fallow field. (3;	
ing, construction. (1)	
Semi- to permanently inundated Regularly inundated/saturated (Seasonally inundated () X Seasonally saturated in upper 3 one or double check and average. Check all disturbances obser	thuman use (1) est), complex (1) or (1) ration. Score one or dbl check. d/saturated (4) (3) 30cm (12in) (1)
•	
score. I average. Check all disturbances observe mowing grazing grazing x clearcuting	shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment
	100 year floodplain (1) Between stream/lake and other x Part of wetland/upland (e.g. for Part of riparian or upland corrid 3d. Duration inundation/saturated Seasonally inundated/saturated Seasonally inundated/saturated Seasonally saturated in upper (a) x Seasonally saturated (a) x Seaso

Wetla	nd ID:	W-WRL-004					
Site:	AEP Ilesb	oro 138 kV Project	Rater(s):	B. I	eopold and C.Wyse	Date:	9/1/2022
					Field ID:		
	40.0				W-WRL-004		
	subtotal this page						
0	.0 40.0	Metric 5. Special We	tlands.				
max 10 pts.	subtotal	Check all that apply and					
		Bog (10)					
	-	Fen (10) Old growth forest (10)					
		Mature forested wetland (5)					
		Lake Erie coastal/tributary wetlar	d-unrestricted hydrology (10)			
		Lake Erie coastal/tributary wetlar					
	-	Lake Plain Sand Prairies (Oak O Relict Wet Praires (10)	penings) (10)				
	ŀ	Known occurrence state/federal t	hreatened or endangered	species	(10)		
		Significant migratory songbird/wa	iter fowl habitat or usage (*	10)	,		
	L	Category 1 Wetland. See Question	on 5 Qualitative Rating (-10	0)			
6	.0 46.0	Metric 6. Plant comm	nunities interene	reion	microtonography		
max 20pts.	subtotal	6a. Wetland Vegetation C		131011	Vegetation Community C	over Scale	
max zopis.	Subtotal	Score all present using 0 to 3 sca		0	Absent or comprises <0.1ha (0.24)		
		Aquatic bed		1	Present and either comprises sma	Il part of wetland's 1	
		0 Emergent			vegetation and is of moderate qua		
		0 Shrub 1 Forest		2	significant part but is of low quality Present and either comprises sign		
	ŀ	Mudflats		2	vegetation and is of moderate qua		
	į	Open water			part and is of high quality		
	Ĺ	Other		3	Present and comprises significant	part, or more, of wetland's 3	
		6b. horizontal (plan view) Inters Select only one.	spersion.		vegetation and is of high quality		
	Ī	High (5)			Narrative Description of Vegetat	ion Quality	
		Moderately high(4)			Low spp diversity and/or predomin	ance of nonnative or low	
		x Moderate (3)			disturbance tolerant native species		
	-	Moderately low (2) Low (1)			Native spp are dominant compone although nonnative and/or disturba		
	ŀ	None (0)			can also be present, and species of		
	-	6c. Coverage of invasive plants			moderately high, but generallyw/o	presence of rare	
		Table 1 ORAM long form for list.	Add		threatened or endangered spp to	with poppetive one high	
	Г	or deduct points for coverage Extensive >75% cover (-5)			A predominance of native species and/or disturbance tolerant native		
	ļ i	Moderate 25-75% cover (-3)			absent, and high spp diversity and		
		Sparse 5-25% cover (-1)			the presence of rare, threatened, of	or endangered spp	
	-	Nearly absent <5% cover (0) x Absent (1)			Mudflat and Open Water Class C	alitu	
	L	6d. Microtopography.		0	Absent <0.1ha (0.247 acres)	quanty	
	_	Score all present using 0 to 3 sca	ale.		Low 0.1 to <1ha (0.247 to 2.47 acr	res)	
		0 Vegetated hummucks/tussucks			Moderate 1 to <4ha (2.47 to 9.88 a	acres)	
		Coarse woody debris >15cm (6in Standing dead >25cm (10in) dbh		3	High 4ha (9.88 acres) or more		
	ŀ	Standing dead >25cm (10m) don Amphibian breeding pools			Microtopography Cover Scale		
	-			0	Absent		
				1	Present very small amounts or if m	nore common	-
				2	of marginal quality Present in moderate amounts, but	not of highest	
	46 N	TOTAL (Max 100 pts)		-	·	· ·	
 		Category		3	quality or in small amounts of high Present in moderate or greater am		
	Z	-alogoly		3	I resem in moderate or greater an	iounio	

and of highest quality

W-WRL-004-ORAM.xlsx | Quantitative Form

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	(0	
	Metric 2. Buffers and surrounding land use	1	4	
	Metric 3. Hydrology	1	2	
	Metric 4. Habitat	1	4	
	Metric 5. Special Wetland Communities	(0	
	Metric 6. Plant communities, interspersion, microtopography		6	
	TOTAL SCORE	4	6	Category based on score breakpoints 2

 $Complete\ Wetland\ Categorization\ Worksheet.$

Wetland ID:	W-WRL-004
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	*YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	*NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
		Final Catagor	
		Final Categor	"У



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-004

Date:

September 1, 2022

Description:

PFO

Category 2

Facing North



Wetland W-WRL-004

Date:

September 1, 2022

Description:

PFO

Category 2

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-004

Date:

September 1, 2022

Description:

PFO

Category 2

Facing South



Wetland W-WRL-004

Date:

September 1, 2022

Description:

PFO

Category 2

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-004

Date:

September 1, 2022

Description:

PFO

Category 2

Soil Pit



U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP llesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/1/22
Applicant/Owner: AEP		<u> </u>	State: Of	H Sampling Point:	W-WRL-004-UPL
Investigator(s): WRL, CRW		Section, Township, Range:	S3 T12N R17W		
Landform (hillside, terrace, etc.): Hillslope	Lo	cal relief (concave, convex,		Slope (%):	10
Subregion (LRR or MLRA): LRR N	Lat: 39.37887	•	32.45199		WGS84
Soil Map Unit Name: SbE: Sewell channery f				fication: None	
Are climatic / hydrologic conditions on the site				no, explain in Remarks	. \
, ,					
Are Vegetation, Soil, or Hydrol			ircumstances" pres		NO
Are Vegetation, Soil, or Hydrol			olain any answers ir		
SUMMARY OF FINDINGS – Attach	site map showing	sampling point location	ons, transects,	important featur	es, etc.
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area			
Hydric Soil Present?	Yes No X	within a Wetland?	Yes	No X	
Wetland Hydrology Present?	Yes No X			<u> </u>	
Upland point associated with wetland W-WR Precipitation has been higher than average v		ation indicator present, but l	acking hydric soil ai	nd wetland hydrology i	ndicators.
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicat	ors (minimum of two re	equired)
Primary Indicators (minimum of one is require	ed; check all that apply)		Surface Soil C	Cracks (B6)	
Surface Water (A1)	True Aquatic Plants			etated Concave Surfac	e (B8)
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Patte		
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lin		
Water Marks (B1)	Presence of Reduce	` '		Vater Table (C2)	
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burro		(C0)
Drift Deposits (B3)	Thin Muck Surface (sible on Aerial Imagery	(C9)
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Re	iliaiks)	Geomorphic P	essed Plants (D1)	
Inundation Visible on Aerial Imagery (B7	1		Shallow Aquita		
Water-Stained Leaves (B9)	1			phic Relief (D4)	
Aquatic Fauna (B13)			FAC-Neutral 7	, ,	
Field Observations:			_	(-/	
Surface Water Present? Yes	No X Depth (inch	es):			
Water Table Present? Yes	No X Depth (inch	es):			
Saturation Present? Yes	No X Depth (inch	es): Wetland I	Hydrology Present	t? Yes	No X
(includes capillary fringe)					
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos	s, previous inspections), if a	vailable:		
Remarks:					
No wetland hydrology indicators present.					
,					

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer rubrum	60	Yes	FAC	Number of Dominant Species
2. Liriodendron tulipifera	20	Yes	FACU	That Are OBL, FACW, or FAC: 3 (A)
3.				
				Total Number of Dominant
4.				Species Across All Strata: 5 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 60.0% (A/B)
7.				Prevalence Index worksheet:
	80	=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 4	0 20%	of total cover:	16	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15' r)				FACW species 3 x 2 = 6
1. Lindera benzoin	35	Yes	FAC	FAC species 108 x 3 = 324
	$\overline{}$			
2. Rosa multiflora	10	<u>No</u>	FACU	FACU species 58 x 4 = 232
3. Betula nigra	3	No	FACW	UPL species0 x 5 =0
4. Carpinus caroliniana	3	No	FAC	Column Totals: 169 (A) 562 (B)
5				Prevalence Index = B/A = 3.33
6.				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8.				X 2 - Dominance Test is >50%
				l
9				3 - Prevalence Index is ≤3.0 ¹
		=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 2	6 20%	of total cover:	11	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)
Polystichum acrostichoides	20	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
2. Rubus idaeus	10	Yes	FAC	be present, unless disturbed or problematic.
3. Galium aparine	5	No	FACU	Definitions of Four Vegetation Strata:
-		110	1 700	-
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of
6.				height.
7				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
11.		T-1-1 0		
		=Total Cover	_	Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover:1	8 20%	of total cover:	7	height.
Woody Vine Stratum (Plot size: 30' r)				
Parthenocissus quinquefolia	3	No	FACU	
2.				
3.				
4.				
5				Hydrophytic
		=Total Cover		Vegetation
50% of total cover:2	2 20%	of total cover:	1	Present? Yes X No No
Remarks: (Include photo numbers here or on a sepa Hydrophytic vegetation indicator present.	rate sheet.)			

Sampling Point: W-WRL-004-UPL

SOIL Sampling Point: w-wrl-004-UPL

	ription: (Describe	to the dep				ator or co	onfirm the absen	ce of indic	ators.)	
Depth	Matrix			x Featu	- 1	. 2	_		_	
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type	Loc ²	Texture	_	Rem	arks
0-3	10YR 3/2	100					Loamy/Clayey			
3-7	10YR 4/3	100					Loamy/Clayey			
7-15	10YR 5/4	100	_				Loamy/Clayey	_		
	-									
¹Type: C=Co	oncentration, D=Depl	letion. RM:	=Reduced Matrix. N	 //S=Mas	ked San	 d Grains.	² Loca	tion: PL=Po	ore Lining, M	=Matrix.
Hydric Soil I		,	,							tic Hydric Soils ³ :
Histosol			Polyvalue Be	elow Su	rface (S8	(MLRA			ck (A10) (ML	-
	ipedon (A2)		Thin Dark Su						airie Redox (
Black His			Loamy Muck						147, 148)	,7110)
	n Sulfide (A4)		Loamy Gleye	•	. , .		-,		t Floodplain	Soils (F19)
	Layers (A5)		Depleted Ma				_		136, 147)	Collo (1 10)
	ck (A10) (LRR N)		Redox Dark	` '	,				ent Material (F21)
	Below Dark Surface	Δ(Δ11)	Depleted Da				_		de MLRA 12	
	rk Surface (A12)	, (, (, , ,)	Redox Depre		. ,			•	allow Dark Su	
	ucky Mineral (S1)		Iron-Mangan			2) (LRR I			xplain in Ren	
	leyed Matrix (S4)		MLRA 136			-/ (-				,
	edox (S5)		Umbric Surfa		3) (MLRA	122. 130	6) ³ I	ndicators of	hvdrophytic	vegetation and
	Matrix (S6)		Piedmont Flo							ust be present,
	face (S7)		Red Parent I						sturbed or p	
	-ayer (if observed):			riatoriai	(: Z:) (, , , 	4111000 41	otarboa or pr	obiomatio.
Type:	ayer (ii observed).									
Depth (in	iches).						Hydric Soil Pı	esent?	Yes	No X
							1 Tiyane Gon Ti	cociit:		<u></u>
Remarks:	I indicators present.									
No flydlic soi	i indicators present.									

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/1/22
Applicant/Owner: AEP			State: OH	Sampling Point:	W-WRL-005
Investigator(s): WRL, CRW	Sec	tion, Township, Range:	S3 T12N R17W		
Landform (hillside, terrace, etc.): Bottom lands	Local r	elief (concave, convex, ı	none): Concave	Slope (%):	2
	Lat: 39.37745		32.45245		WGS84
Soil Map Unit Name: WhL1D1: Wharton-Latham s	-			ation: R4SBC	
Are climatic / hydrologic conditions on the site typic		Yes	No X (If no,	explain in Remark	s)
Are Vegetation , Soil , or Hydrology	-		rcumstances" presen		
			•		
Are Vegetation, Soil, or Hydrology _ SUMMARY OF FINDINGS – Attach site			olain any answers in F Ons, transects, in		res, etc.
			,	•	
Hydrophytic Vegetation Present? Yes_		the Sampled Area			
Hydric Soil Present? Yes_		thin a Wetland?	Yes_X	No	
Wetland Hydrology Present? Yes _ Remarks:	X No				
PFO wetland at the confluence of three small streathe past 30 days. Wetland hydrology indicators, hy	,	*		n higher than avera	ge within
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicators	s (minimum of two	equired)
Primary Indicators (minimum of one is required; ch		<u></u>	Surface Soil Cra	` '	
- 	rue Aquatic Plants (B14			ted Concave Surfa	ce (B8)
	Hydrogen Sulfide Odor (C		X Drainage Pattern		
	Oxidized Rhizospheres of		Moss Trim Lines		
	Presence of Reduced Iro		Dry-Season Wat		
<u> </u>	Recent Iron Reduction in	Tilled Soils (C6)	Crayfish Burrows		. (00)
	Thin Muck Surface (C7)	(0)		e on Aerial Imagery	/ (C9)
	Other (Explain in Remark	(S)	Stunted or Stres		
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)			X Geomorphic Pos		
X Water-Stained Leaves (B9)			Shallow Aquitaro Microtopographi		
Aquatic Fauna (B13)			X FAC-Neutral Tes		
				St (D3)	
Field Observations: Surface Water Present? Yes X No	Donth (inches):	2			
Surface Water Present? Yes X No Water Table Present? Yes No	Depth (inches): X Depth (inches):				
Saturation Present? Yes X No	Depth (inches):		lydrology Present?	Yes X	No
(includes capillary fringe)	Deptil (illolles).	venana i	iyurology Fresent:	163 <u> </u>	. 110
Describe Recorded Data (stream gauge, monitoring	g well, aerial photos, pre	evious inspections), if a	/ailable:		
	g, p, p				
Remarks: Multiple primary and secondary wetland hydrology	indicators present.				
, , , , , , , , , , , , , , , , , , , ,	•				

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:
1. Salix nigra	35	Yes	OBL	Number of Dominant Species
2. Betula nigra	10	No	FACW	That Are OBL, FACW, or FAC: 5(A)
3. Liriodendron tulipifera	10	No	FACU	Total Number of Dominant
4.				Species Across All Strata: 6 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 83.3% (A/B)
7.				Prevalence Index worksheet:
	55	=Total Cover		Total % Cover of: Multiply by:
50% of total cover:		of total cover:	11	
	28 20%	oi total cover.	11	
Sapling/Shrub Stratum (Plot size: 15' r)	.,	=4014	FACW species 90 x 2 = 180
1. Betula nigra	10	Yes	FACW	FAC species 28 x 3 = 84
2. Rosa multiflora	25	Yes	FACU	FACU species 37 x 4 = 148
3. Lindera benzoin	15	Yes	FAC	UPL species 0 x 5 = 0
4				Column Totals: 205 (A) 462 (B)
5.				Prevalence Index = B/A = 2.25
6.				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8.				X 2 - Dominance Test is >50%
9.				X 3 - Prevalence Index is ≤3.0¹
<u> </u>	50	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
500/ ()			4.0	data in Remarks or on a separate sheet)
	25 20%	of total cover:	10	
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)
Impatiens capensis	30	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must
2. Boehmeria cylindrica	25	Yes	FACW	be present, unless disturbed or problematic.
3. Dichanthelium clandestinum	10	No	FAC	Definitions of Four Vegetation Strata:
4. Scirpus atrovirens	15	No	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Juncus effusus	5	No	FACW	more in diameter at breast height (DBH), regardless of
6. Persicaria virginiana	3	No	FAC	height.
7. Leersia virginica	5	No	FACW	Sapling/Shrub – Woody plants, excluding vines, less
8. Cinna arundinacea	5	No	FACW	than 3 in. DBH and greater than or equal to 3.28 ft
9.		140	TAOW	(1 m) tall.
·				` '
10.				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
		=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover:	49 20%	of total cover:	20	height.
Woody Vine Stratum (Plot size:)				
Vitis aestivalis	2	No	FACU	
2.				
3.				
4.				
5.				
·	2 :	=Total Cover		Hydrophytic
50% of total cover:			1	Vegetation Present? Yes X No
50% of total cover.	1 20%	of total cover:		Present?
Remarks: (Include photo numbers here or on a sep Hydrophytic vegetation indicators present.	arate sheet.)			

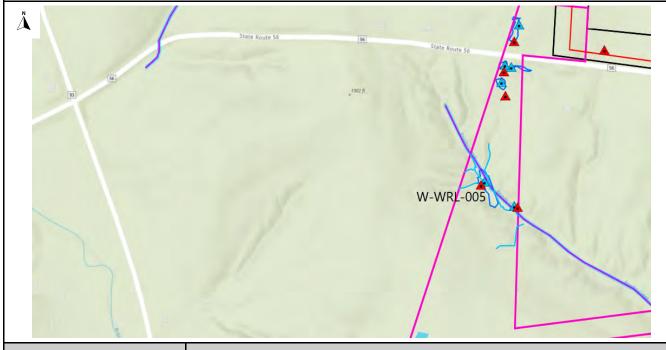
Sampling Point: W-WRL-005

SOIL Sampling Point: W-WRL-005

		o the dep				ator or c	onfirm the absence	of indicators.)
Depth	Matrix	0/		x Featu		1.0.2	Tandona	Demonto
(inches) 0-2	2.5Y 6/3	<u>%</u> 70	Color (moist) 10YR 4/6	30	Type ¹	Loc ²	Texture Learny/Clavey	Remarks Prominent redox concentrations
2-13	2.5Y 2.5/1	95	2.5Y 5/6	5	<u> </u>	PL	Loamy/Clayey Loamy/Clayey	Prominent redox concentrations
								1 Tomment redex concentrations
13-17	2.5Y 5/2	80	2.5Y 5/6	20	<u>C</u>	<u>M</u>	Loamy/Clayey	Prominent redox concentrations
¹Type: C=Cc	oncentration, D=Depl	etion, RM	=Reduced Matrix, N	MS=Mas	sked San	d Grains.		: PL=Pore Lining, M=Matrix. :ators for Problematic Hydric Soils ³ :
Histosol			Polyvalue Be	elow Su	rface (S8) (MLRA		2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Thin Dark Su					Coast Prairie Redox (A16)
Black His			Loamy Muck					(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye	-				Piedmont Floodplain Soils (F19)
Stratified	Layers (A5)		X Depleted Ma	trix (F3))			(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		X Redox Dark	Surface	(F6)		F	Red Parent Material (F21)
Depleted	Below Dark Surface	(A11)	Depleted Da		. ,			(outside MLRA 127, 147, 148)
	rk Surface (A12)		Redox Depre		, ,			/ery Shallow Dark Surface (F22)
	ucky Mineral (S1)		Iron-Mangan		sses (F1	2) (LRR I	N,(Other (Explain in Remarks)
	leyed Matrix (S4)		MLRA 136		·	100 10	31 11	
	edox (S5)		Umbric Surfa					cators of hydrophytic vegetation and
	Matrix (S6)		Piedmont Flo					vetland hydrology must be present,
	face (S7)		Red Parent I	viateriai	(F21) (M	LRA 12/	′, 147, 148) և	ınless disturbed or problematic.
	ayer (if observed):							
Type:								
Depth (in	iches):						Hydric Soil Prese	ent? Yes <u>X</u> No
Remarks:	Р							
Hydric soil in	dicator present.							

Background Information			
Name:	B. Leopold and C.Wyse		
Date:	9/1/2022		
Affiliation:	AECOM		
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202		
Phone Number:	859-640-5603		
e-mail address:	Bill.Leopold@aecom.com		
Name of Wetland:	W-WRL-005		
Vegetation Communit(ies):	PFO		
HGM Class(es):	MINERAL SOIL FLATS		

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate:	39.37745, -82.45245
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	Brushy Fork (HUC: 050901010203)
Site Visit:	9/1/2022
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-WRL-005		
Wetland Size (delineated acres):	0.25	Wetland Size (Estimated total acres):	0.25
Sketch: Include north arrow, relation N	W-WRL-005	getation zones, etc.	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.3		

PFO wetland at the confluence of three small streams S-WRL-001, S-WRL-003, and S-WRL-004. Precipitation has been higher than average within the past 30 days. Wetland hydrology indicators, hydrophytic vegetation indicator, and hydric soil indicator present.

Final score: 59 Category: 2

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	x	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
_	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
0	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

9a	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh? Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a YES Go to Question 9b	*NO Go to Question 9a *NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	*NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	*NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	*NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	*NO Complete Quantitative Rating

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Vetland ID: W-WRL-005		
te: AEP llesboro 138 kV Project Rater(s): B. Leopold	and C.Wyse	Date: 9/1/2022
	Field ID:	<u> </u>
	Field ID:	
1.0 1.0 Metric 1. Wetland Area (size).	W-WRL-005	
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)	Delineated acres:	0.25
3 to <10 acres (1.2 to <4ha) (3 pts)	Total acres:	0.25
0.3 to <3 acres (0.12 to <1.2ha) (2pts) x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)		
<0.1 acres (0.04ha) (0 pts)		
12.0 14.0 Matria 2. Unland huffers and a con-	nding land was	
13.0 14.0 Metric 2. Upland buffers and surrou	•	
x 14 pts. subtotal 2a. Calculate average buffer width. Select only one at	-	
x WIDE. Buffers average 50m (164ft) or more around wetla MEDIUM. Buffers average 25m to <50m (82 to <164ft) ar		
NARROW. Buffers average 10m to <25m (32ft to <82ft) a	around wetland perimeter (1)	
VERY NARROW. Buffers average <10m (<32ft) around v		
2b. Intensity of surrounding land use. Select one or d		
x LOW. Old field (>10 years), shrubland, young second gro		
MODERATELY HIGH. Residential, fenced pasture, park,	conservation tillage, new fallow field. (3)	
HIGH. Urban, industrial, open pasture, row cropping, min	ing, construction. (1)	
24.0 38.0 Metric 3. Hydrology.		
	2h Convertibile Community	nat apply
ax 30 pts. subtotal 3a. Sources of Water. Score all that apply. High pH groundwater (5)	3b. Connectivity. Score all th	пат арріу.
X Other groundwater (3)	Between stream/lake and othe	
x Precipitation (1)	Part of wetland/upland (e.g. for	rest), complex (1)
x Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5)	x Part of riparian or upland corric 3d. Duration inundation/satu	dor (1) Iration. Score one or dbl check.
3c. Maximum water depth. Select one.	Semi- to permanently inundate	ed/saturated (4)
>0.7 (27.6in) (3)	x Regularly inundated/saturated Seasonally inundated (2)	(3)
0.4 to 0.7m (15.7 to 27.6in) (2) x <0.4m (<15.7in) (1)	Seasonally saturated in upper	30cm (12in) (1)
3e. Modifications to natural hydrologic regime. Score	one or double check and average.	
x None or none apparent (12) Recovered (7)	Check all disturbances obse	point source (nonstormwater)
Recovering (3)	tile	filling/grading
Recent or no recovery (1)	dike	road bed/RR track
	weir stormwater input	dredging Other:
		
11.0 49.0 Metric 4. Habitat Alteration and Dev	•	
4a. Substrate disturbance. Score one or double check	k 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)	3001G.	
Very good (6)		
x Good (5) Moderately good (4)		
Fair (3)		
Poor to fair (2)		
Poor (1) 4c. Habitat alteration. Score one or double check and	average.	
None or none apparent (9)	Check all disturbances observe	
Recovering (3)	mowing grazing	shrub/sapling removal
x Recovering (3) Recent or no recovery (1)		herbaceous/aquatic bed removal x sedimentation
	selective cutting	dredging
	woody debris removal toxic pollutants	farming nutrient enrichment
	toxic politicarits	nation emicinion
49.0		
subtotal this page ORAM v. 5.0 Field Form Quantitative Rating		

W-WRL-005-ORAM.xlsx | Quantitative Form 9/27/2022

Wetla	ınd ID:	W-WRL-005					
Site:	AEP Ilesbo	ro 138 kV Project	Rater(s):	В.	Leopold and C.Wyse	Date:	9/1/2022
			(.) .				
					Field ID:		
	49.0				W-WRL-005		
	subtotal this page						
(0.0 49.0	Metric 5. Special We	tlands.				
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 wetlar Lake Erie coastal/tributary wetlar		10)			
		Lake Plain Sand Prairies (Oak O					
		Relict Wet Praires (10) Known occurrence state/federal	threatened or endangered	snecies	(10)		
		Significant migratory songbird/wa	ater fowl habitat or usage (1	10)	(10)		
	_	Category 1 Wetland. See Questi	on 5 Qualitative Rating (-10	0)			
10	0.0 59.0	Metric 6. Plant comn	nunities, interspe	rsior	ı. microtopography.		
max 20pts.	subtotal	6a. Wetland Vegetation C			Vegetation Community (Cover Scale	
·		Score all present using 0 to 3 sca		0	Absent or comprises <0.1ha (0.24	171 acres) contiguous area	
	<u> </u>	Aquatic bed 2 Emergent		1	Present and either comprises sma vegetation and is of moderate qua		
		0 Shrub			significant part but is of low quality		
		0 Forest		2	Present and either comprises sign		,
	-	Mudflats Open water			vegetation and is of moderate qua-	ality or comprises a small	
		Other		3	Present and comprises significant	t part, or more, of wetland's 3	
		6b. horizontal (plan view) Inter Select only one.	spersion.		vegetation and is of high quality		
		High (5)			Narrative Description of Vegeta		
	-	Moderately high(4) Moderate (3)			Low spp diversity and/or predoming disturbance tolerant native species		
		Moderately low (2)			Native spp are dominant component	ent of the vegetation, mod	
	<u> </u>	Low (1) None (0)			although nonnative and/or disturb can also be present, and species		
	_	6c. Coverage of invasive plant	s. Refer		moderately high, but generallyw/c		
		Table 1 ORAM long form for list. or deduct points for coverage	Add		threatened or endangered spp to	with populative and high	
		Extensive >75% cover (-5)			A predominance of native species and/or disturbance tolerant native		
		Moderate 25-75% cover (-3)			absent, and high spp diversity and	d often, but not always,	
	-	Sparse 5-25% cover (-1) Nearly absent <5% cover (0)			the presence of rare, threatened,	or endangered spp	
		x Absent (1)			Mudflat and Open Water Class	Quality	
		6d. Microtopography. Score all present using 0 to 3 sca	ale		Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 ac	eres)	
		 Vegetated hummucks/tussucks 		2	Moderate 1 to <4ha (2.47 to 9.88		
		Coarse woody debris >15cm (6ir 0 Standing dead >25cm (10in) dbh		3	High 4ha (9.88 acres) or more		
		1 Amphibian breeding pools	ı		Microtopography Cover Scale		
	<u></u>	<u> </u>			Absent		
				1	Present very small amounts or if r of marginal quality	more common	
				2		t not of highest	
		OTAL (Max 100 pts)			quality or in small amounts of high	nest quality	
	2 0	ategory		3	Present in moderate or greater ar	mounts	
					and of highest quality		

W-WRL-005-ORAM.xlsx | Quantitative Form 9/27/2022

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		1	
	Metric 2. Buffers and surrounding land use	1	.3	
	Metric 3. Hydrology	2	24	
	Metric 4. Habitat	1	1	
	Metric 5. Special Wetland Communities	(0	
	Metric 6. Plant communities, interspersion, microtopography	1	.0	
	TOTAL SCORE	5	9	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

Wetland ID:	W-WRL-005
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	*YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	*NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
		Final Catagor	
		Final Categor	у



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-005

Date:

September 1, 2022

Description:

PFO

Category 2

Facing North



Wetland W-WRL-005

Date:

September 1, 2022

Description:

PFO

Category 2

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-005

Date:

September 1, 2022

Description:

PFO

Category 2

Facing South



Wetland W-WRL-005

Date:

September 1, 2022

Description:

PFO

Category 2

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-005

Date:

September 1, 2022

Description:

PFO

Category 2

Soil Pit



U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP llesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/1/22	
Applicant/Owner: AEP		<u> </u>	State: OH	Sampling Point:	W-WRL-005-UPL	
Investigator(s): WRL, CRW	(Section, Township, Range:	S3 T12N R17W	_		
Landform (hillside, terrace, etc.): Hillslope		al relief (concave, convex, r		Slope (%):	15	
Subregion (LRR or MLRA): LRR N	Lat: 39.37740		32.45253		WGS84	
Soil Map Unit Name: WhL1D1: Wharton-Latha			NWI classific			
Are climatic / hydrologic conditions on the site to	· · · · · · · · · · · · · · · · · · ·	·		explain in Remarks	<u> </u>	
, ,						
Are Vegetation, Soil, or Hydrolog			rcumstances" presen		. NO	
Are Vegetation, Soil, or Hydrolog			lain any answers in F			
SUMMARY OF FINDINGS – Attach s	ite map showing s	ampling point location	ons, transects, ii	mportant featu	res, etc.	
Hydrophytic Vegetation Present? Ye	es X No	Is the Sampled Area				
Hydric Soil Present? Ye	es No X	within a Wetland?	Yes	No X		
Wetland Hydrology Present? Ye	es No X			· <u></u>		
Upland point associated with wetland W-WRL- present, but lacking hydric soil and wetland hydric soil		•	, , , ,		ator	
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators	s (minimum of two r	equired)	
Primary Indicators (minimum of one is required	d; check all that apply)		Surface Soil Cra	cks (B6)		
Surface Water (A1)	True Aquatic Plants (E			ited Concave Surfa	ce (B8)	
High Water Table (A2)	Hydrogen Sulfide Odd		Drainage Patterr			
Saturation (A3)		eres on Living Roots (C3) Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduced	<u> </u>				
Sediment Deposits (B2)		tion in Tilled Soils (C6) Crayfish Burrows (C8) (C7) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3)	Thin Muck Surface (C				(C9)	
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Rem	iaiks)	Stunted or Stres Geomorphic Pos			
Inundation Visible on Aerial Imagery (B7)			Shallow Aquitare			
Water-Stained Leaves (B9)			Microtopographi			
Aquatic Fauna (B13)			FAC-Neutral Tes			
Field Observations:						
Surface Water Present? Yes N	No X Depth (inche	s):				
Water Table Present? Yes N	No X Depth (inche					
Saturation Present? Yes N	No X Depth (inche	s): Wetland H	lydrology Present?	Yes	No X	
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monit	toring well, aerial photos,	previous inspections), if av	ailable:			
Remarks:						
No wetland hydrology indicators present.						
The mediana hydrology maleaters present						

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:
1. Quercus rubra	15	Yes	FACU	Number of Dominant Species
2. Diospyros virginiana	25	Yes	FAC	That Are OBL, FACW, or FAC: 5(A)
3. Acer saccharinum	10	No	FACW	Total Number of Dominant
4. Liriodendron tulipifera	5	No	FACU	Species Across All Strata: 8 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 62.5% (A/B)
7.				Prevalence Index worksheet:
	55 :	=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 2		of total cover:	11	
	20%	or total cover.	11	<u> </u>
Sapling/Shrub Stratum (Plot size: 15' r)	0.5	V	E40	
Diospyros virginiana	25	Yes	FAC	FAC species 70 x 3 = 210
2. Carya ovata	10	Yes	FACU	FACU species 60 x 4 = 240
3. Lindera benzoin	10	Yes	FAC	UPL species 0 x 5 = 0
4. Betula nigra	2	No	FACW	Column Totals: 167 (A) 524 (B)
5				Prevalence Index = B/A = 3.14
6.				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8.				X 2 - Dominance Test is >50%
9.				3 - Prevalence Index is ≤3.0 ¹
·	47 :	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
FOOV of total covers		of total cover:	10	data in Remarks or on a separate sheet)
50% of total cover: 2	4 20%	or total cover.	10	
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)
Polystichum acrostichoides	30	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
2. Thelypteris palustris	25	Yes	FACW	be present, unless disturbed or problematic.
3. Lindera benzoin	5	No	FAC	Definitions of Four Vegetation Strata:
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of
6.				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
11.		Tatal Cause		
500/ / / /		=Total Cover	40	Woody Vine – All woody vines greater than 3.28 ft in height.
50% of total cover: 3	0 20%	of total cover:	12	neight.
Woody Vine Stratum (Plot size: 30' r)				
Toxicodendron radicans	5	Yes	FAC	
2				
3.				
4.				
5.				Hudran hudia
	5 :	=Total Cover		Hydrophytic Vegetation
50% of total cover: 3	20%	of total cover:	1	Present? Yes X No No
Remarks: (Include photo numbers here or on a sepa Hydrophytic vegetation indicator present.	irate sheet.)			

Sampling Point: W-WRL-005-UPL

SOIL Sampling Point: W-WRL-005-UPL

	ription: (Describe	to the dep				tor or c	onfirm the abs	ence of indic	ators.)		
Depth	Matrix			x Featur	- 1	- 2	_				
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type'	Loc ²	Texture		Rem	arks	
0-5	10YR 3/2	100	_				Sandy			_	
5-15	2.5Y 6/3	100					Sandy				
										_	
¹ Type: C=Co	oncentration, D=Dep	letion RM-	-Reduced Matrix N	AS-Mas	ked Sand		² l c	ocation: PL=P	nre Linina M	=Matrix	
Hydric Soil		iotion, rtivi-	-reduced Water, is	no-iviac	nea can	oranio.				tic Hydric Soils ³ :	
Histosol			Polyvalue Be	elow Su	rface (S8)	(MLRA	147, 148)		ck (A10) (ML	-	
	ipedon (A2)		Thin Dark Su						airie Redox (-	
Black His	stic (A3)		Loamy Muck	y Miner	al (F1) (N	ILRA 13	6)	(MLRA	147, 148)		
	n Sulfide (A4)		Loamy Gleye						t Floodplain	Soils (F19)	
	Layers (A5)		Depleted Ma						136, 147)	== ()	
	ck (A10) (LRR N)	(044)	Redox Dark		, ,				ent Material (
	Below Dark Surface rk Surface (A12)	(A11)	Depleted Da Redox Depre		. ,				de MLRA 12 allow Dark Su		
	ucky Mineral (S1)		Iron-Mangan			2) (LRR I	٧.		xplain in Ren		
	leyed Matrix (S4)		MLRA 136		(, (•			.,	
Sandy R	edox (S5)		Umbric Surface (F13) (MLRA 122, 136				6) ³ Indicators of hydrophytic vegetation and			vegetation and	
Stripped	Matrix (S6)		Piedmont Flo	Piedmont Floodplain Soils (F19) (MLR							
Dark Sur	face (S7)		Red Parent I	Material	(F21) (M	LRA 127	, 147, 148)	unless d	sturbed or p	oblematic.	
Restrictive I	ayer (if observed):										
Type:											
Depth (ir	iches):						Hydric Soil	Present?	Yes	No _X	
Remarks:	Lindiantar propert										
No flyanc so	I indicator present.										
No flydic Sol	Tillucator present.										

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP llesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/1/22	
Applicant/Owner: AEP			State: OH	Sampling Point:	W-WRL-006	
Investigator(s): WRL, CRW		Section, Township, Range:	S3 T12N R17W	_		
Landform (hillside, terrace, etc.): Terrace	Lo	ocal relief (concave, convex,		Slope (%):	3	
Subregion (LRR or MLRA): LRR N	Lat: 39.37705		32.45180		WGS84	
Soil Map Unit Name: WhL1D1: Wharton-Lat				ation: R4SBC		
Are climatic / hydrologic conditions on the site	<u>-</u>	· · · · · · · · · · · · · · · · · · ·	No X (If no,	explain in Remark	s)	
Are Vegetation , Soil , or Hydro			rcumstances" presen			
			·		. 110	
Are Vegetation, Soil, or Hydro			plain any answers in F			
SUMMARY OF FINDINGS – Attach	site map snowing	sampling point location	ons, transects, ii	mportant featu	res, etc.	
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area				
Hydric Soil Present?	Yes X No	within a Wetland?	Yes_X	No		
Wetland Hydrology Present?	Yes X No			· <u>——</u>		
Remarks: A small pocket, PEM wetland on the terrace hydrology indicators, hydrophytic vegetation			than average within th	ne past 30 days. W	etland	
HYDROLOGY Wetland Hydrology Indicators:			Sacandary Indicator	(minimum of two	roquirod)	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is requi	rad: abaak all that apply)		Secondary Indicators	•	<u>requirea)</u>	
X Surface Water (A1)	True Aquatic Plants	(B14)	Surface Soil Cra	` '	rce (B8)	
X High Water Table (A2)	Hydrogen Sulfide O					
X Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines			
Water Marks (B1)	Presence of Reduce		Dry-Season Wat			
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows			
Drift Deposits (B3)	Thin Muck Surface	` '		e on Aerial Imager	v (C9)	
Algal Mat or Crust (B4)	Other (Explain in Re		Stunted or Stres		, ()	
Iron Deposits (B5)			X Geomorphic Pos			
Inundation Visible on Aerial Imagery (B)	')		Shallow Aquitard			
X Water-Stained Leaves (B9)	•		Microtopographi			
Aquatic Fauna (B13)			X FAC-Neutral Tes			
Field Observations:						
Surface Water Present? Yes X	No Depth (inch	nes): 6				
Water Table Present? Yes X	No Depth (inch	nes): 5				
Saturation Present? Yes X	No Depth (inch	nes): 0 Wetland H	lydrology Present?	Yes X	No	
(includes capillary fringe)						
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photo	s, previous inspections), if av	/ailable:			
Remarks: Multiple primary and one secondary wetland	hydrology indicator prese	ent.				

VEGETATION (Four Strata) – Use scientific names of plants.

Tree Chretime (Diet size) 201 m	Absolute	Dominant	Indicator	Descinence Test weeks heat
Tree Stratum (Plot size: 30' r) 1.	% Cover	Species?	Status	Dominance Test worksheet:
2.				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 2 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100.0% (A/B)
7.				Prevalence Index worksheet:
		Total Cover		Total % Cover of: Multiply by:
50% of total cover:	20%	of total cover:		OBL species 75 x 1 = 75
Sapling/Shrub Stratum (Plot size: 15' r)				FACW species 22 x 2 = 44
1				FAC species 2 x 3 = 6
2.				FACU species 0 x 4 = 0
3				UPL species 0 x 5 = 0
4				Column Totals: 99 (A) 125 (B)
5				Prevalence Index = B/A = 1.26
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				X 2 - Dominance Test is >50%
9				X 3 - Prevalence Index is ≤3.0 ¹
		=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20%	of total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)
Sparganium americanum	40	Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must
2. Scirpus atrovirens	25	Yes	OBL	be present, unless disturbed or problematic.
3. Scirpus cyperinus	10	No	FACW	Definitions of Four Vegetation Strata:
4. Carex frankii	10	No	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Panicum dichotomiflorum	10	No	FACW	more in diameter at breast height (DBH), regardless of height.
6. Thelypteris palustris	2	No	FACW	
7. Laportea canadensis	2	No	FAC	Sapling/Shrub – Woody plants, excluding vines, less
8				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9.				
10.				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
500/ 6/ /		=Total Cover	00	Woody Vine – All woody vines greater than 3.28 ft in height.
50% of total cover: 5	0 20%	of total cover:	20	Height.
Woody Vine Stratum (Plot size: 30' r)				
1				
2				
3				
4				
5		Total Cayor		Hydrophytic
FOO/ of total across		=Total Cover		Vegetation Present? Yes X No
50% of total cover:		of total cover:		Present?
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			
Hydrophytic vegetation indicators present.				

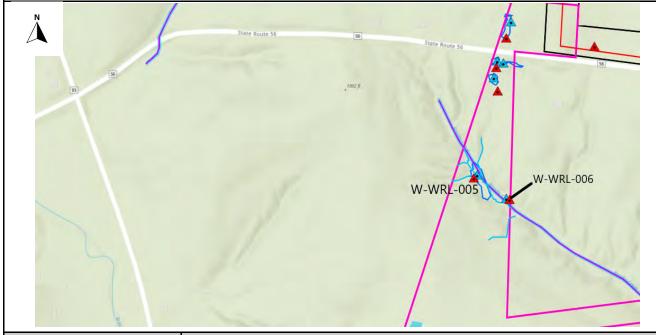
Sampling Point: W-WRL-006

SOIL Sampling Point: W-WRL-006

		to the dep				tor or c	onfirm the absence	of indicators.)
Depth	Matrix	0/		Featur	- 1	12	Tandona	Damada
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type'	Loc ²	Texture	Remarks
0-5	2.5Y 5/2	80	10YR 5/6	20	<u>C</u>	PL	Loamy/Clayey	Prominent redox concentrations
5-17	2.5Y 6/2	90	2.5Y 5/6	10	С	PL	Sandy	Prominent redox concentrations
¹ Type: C=Co	oncentration, D=Depl	etion, RM	=Reduced Matrix, M	1S=Mas	ked San	d Grains.	² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							cators for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be	low Su	rface (S8)	(MLRA	147, 148)	2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Thin Dark Su					Coast Prairie Redox (A16)
Black His			Loamy Muck			ILRA 13		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		, ,		<u>—</u> '	Piedmont Floodplain Soils (F19)
	Layers (A5)		X Depleted Ma	, ,			ı	(MLRA 136, 147) Red Parent Material (F21)
	ck (A10) (LRR N) Below Dark Surface	(Δ11)	Redox Dark S Depleted Dark				<u>—</u> '	(outside MLRA 127, 147, 148)
	rk Surface (A12)	, (ДТТ)	Redox Depre				,	Very Shallow Dark Surface (F22)
	ucky Mineral (S1)		Iron-Mangan		. ,	2) (LRR I		Other (Explain in Remarks)
Sandy G	leyed Matrix (S4)		MLRA 136	5)				
X Sandy R	edox (S5)		Umbric Surfa	ce (F13	B) (MLRA	122, 13	6) ³ Indi	cators of hydrophytic vegetation and
	Matrix (S6)		Piedmont Flo	•	•	, .		wetland hydrology must be present,
Dark Sur	face (S7)		Red Parent N	/laterial	(F21) (M	LRA 127	′, 147 , 148) ι	unless disturbed or problematic.
	ayer (if observed):							
Type:								
Depth (in	iches):						Hydric Soil Prese	ent? Yes <u>X</u> No
Remarks:	diaatara pragant							
Tiyunc son in	dicators present.							

Background Information				
Name:	B. Leopold and C.Wyse			
Date:	9/1/2022			
Affiliation:	AECOM			
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202			
Phone Number:	859-640-5603			
e-mail address:	Bill.Leopold@aecom.com			
Name of Wetland:	W-WRL-006			
Vegetation Communit(ies):	PFO			
HGM Class(es):	DEPRESSION			

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate:	39.37705, -82.45180
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	Brushy Fork (HUC: 050901010203)
Site Visit:	9/1/2022
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-WRL-006		
Wetland Size (delineated acres):	0.01	Wetland Size (Estimated total acres):	0.01
Comments, Narrative Discussion, Justif A small pocket, PEM wetland or the past 30 days. Wetland hydro	with other surface waters, vegetate W-WRL-005 W-WRL-005 iication of Category Changes: In the terrace of stream S-WR	w-WRL-006 L-003. Precipitation has been h	nigher than average within
	55		۷

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
_	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
0	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

		T	
86	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the	YES	*NO
	cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status. Go to Question 9a	Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake	YES Go to Question 9b	*NO Go to Question 10
	Erie that is accessible to fish?	GO to Question au	GO to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the	YES	*NO
	loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 9c
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	*NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation	YES	NO
	communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland Go to Question 10	Go to Question 9e
9е	Does the wetland have a predominance of non-native or disturbance tolerant native plant	YES	NO
	species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton,	YES	*NO
	Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or	YES	*NO
	all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating
		l	l

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Wetlan	nd ID:	W-WRL-006					
Site:	AEP llesboro	138 kV Project	Rater(s):	B. Leopold and	C.Wyse	Date:	9/1/2022
					Field ID:		
0.0	0.0	Metric 1. Wet	and Area (s	(azi)	W-WRL-006		
0.0	0.0		•	•	W-WKE-000		
ax 6 pts	subtotal	Select one size clas		re.			
		>50 acres (>20.2ha) 25 to <50 acres (10.1 10 to <25 acres (4 to	to <20.2ha) (5 pts)	Delineated acres:	0.01]
		3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)			Total acres:	0.01	
	U.1 to <0.3 acres (0.04 to <0.12na) (1 pt) x <0.1 acres (0.04ha) (0 pts)						
12.0	0 12.0	Metric 2. Upla	nd buffers	and surroundi	ng land use.		
ax 14 pts.	subtotal			•	sign score. Do not double check		
	-			nore around wetland pe n (82 to <164ft) around			
		NARROW. Buffers av	erage 10m to <25	m (32ft to <82ft) around n (<32ft) around wetlan	d wetland perimeter (1)		
	_		-	. Select one or double	_		
				prairie, savannah, wild			
	-			young second growth for	orest. (5) ervation tillage, new fallow field. (3)		
	-			ow cropping, mining, co			
24.0	ol 36.0l	Metric 3. Hyd		5, 9, -	• •		
		-			al a constitution and	district.	
x 30 pts.	subtotal	3a. Sources of Wate High pH groundwater		pply.	3b. Connectivity. Score all 100 year floodplain (1)	that apply.	
	-	x Other groundwater (3			Between stream/lake and otl	her human use (1)	
		x Precipitation (1)	,		x Part of wetland/upland (e.g.	forest), complex (1)	
	_	 x Seasonal/Intermittent Perennial surface was 		\ /F\	Part of riparian or upland cor 3d. Duration inundation/sa		l abaak
	L	3c. Maximum water			Semi- to permanently inunda		ii check.
	Г	>0.7 (27.6in) (3)		•	x Regularly inundated/saturate		
		0.4 to 0.7m (15.7 to 2	7.6in) (2)		Seasonally inundated (2)	,	
		x <0.4m (<15.7in) (1)			Seasonally saturated in upper	er 30cm (12in) (1)	
	_			ic regime. Score one	or double check and average.		
	-	 x None or none appare Recovered (7) 	nt (12)		Check all disturbances obs	point source (nonstor	mwater)
	-	Recovering (3)			tile	filling/grading	mwatory
		Recent or no recover	y (1)		dike	road bed/RR track	
	_				weir	dredging	
					stormwater input	Other:	
11.0	0 47.0	Metric 4. Hab	itat Alteratio	on and Develor	oment.		
x 20 pts.	subtotal			or double check and	average.		
	-	None or none appare x Recovered (3)	nt (4)				
	-	Recovering (2)					
		Recent or no recover					
	_		nent. Select only	one and assign score).		
	-	Excellent (7) Very good (6)					
	F	x Good (5)					
	F	Moderately good (4)					
		Fair (3)					
		Poor to fair (2)					
	L	Poor (1)	Score one or d	ouble check and avera	200		
	г	None or none appare		DUDIE CHECK AHU AVER	age. Check all disturbances obse	rved	
	F	Recovered (6)	(0)		mowing	shrub/sapling remova	
		x Recovering (3)			grazing	herbaceous/aquatic b	oed removal
		Recent or no recover	y (1)		x clearcutting	x sedimentation	
					selective cutting woody debris removal	dredging farming	
					toxic pollutants	nutrient enrichment	
	47.0						

47.0 subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

W-WRL-006-ORAM.xlsx | Quantitative Form

Wetla	ind ID:	W-WRL-006					
Site:	AEP Ilesb	oro 138 kV Project	Rater(s):	B. I	eopold and C.Wyse	Date:	9/1/2022
					Field ID:		
	47.0				W-WRL-006		
	subtotal this page						
	0.0 47.0	Metric 5. Special We					
max 10 pts.	subtotal	Check all that apply and Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetla Lake Erie coastal/tributary wetla Lake Plain Sand Prairies (Oak C Relict Wet Praires (10) Known occurrence state/federal Significant migratory songbird/w Category 1 Wetland. See Quest	and-unrestricted hydrology (*) and-restricted hydrology (5) Openings) (10) I threatened or endangered vater fowl habitat or usage (*	species	(10)		
8	3.0 55.0	Metric 6. Plant com	munities, interspe	rsion	, microtopography.		
max 20pts.	subtotal	6a. Wetland Vegetation			Vegetation Community (
	Г	Score all present using 0 to 3 so Aquatic bed	cale.	0	Absent or comprises <0.1ha (0.24) Present and either comprises small		
	ŀ	2 Emergent		'	vegetation and is of moderate qua		
		Shrub			significant part but is of low quality	у	
		Forest Mudflats		2	Present and either comprises sign vegetation and is of moderate qua		
	ŀ	Open water			part and is of high quality	ality of comprises a small	
		Other		3	Present and comprises significant	t part, or more, of wetland's 3	
		6b. horizontal (plan view) Inte	rspersion.		vegetation and is of high quality		
	1	Select only one. High (5)			Narrative Description of Vegeta	ation Quality	
	ŀ	x Moderately high(4)			Low spp diversity and/or predomin		
		Moderate (3)			disturbance tolerant native specie		
		Moderately low (2) Low (1)			Native spp are dominant compon- although nonnative and/or disturb		
	ŀ	None (0)			can also be present, and species		
		6c. Coverage of invasive plan			moderately high, but generallyw/c	presence of rare	
		Table 1 ORAM long form for list	. Add		threatened or endangered spp to		
	ſ	or deduct points for coverage Extensive >75% cover (-5)			A predominance of native species and/or disturbance tolerant native		
		Moderate 25-75% cover (-3)			absent, and high spp diversity and		
		Sparse 5-25% cover (-1)			the presence of rare, threatened,	or endangered spp	
		Nearly absent <5% cover (0) x Absent (1)			Mudflet and Onen Water Class	Quality	
	L	x Absent (1) 6d. Microtopography.		0	Mudflat and Open Water Class Absent <0.1ha (0.247 acres)	Quanty	
	_	Score all present using 0 to 3 so	cale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac		
		0 Vegetated hummucks/tussucks			Moderate 1 to <4ha (2.47 to 9.88	acres)	
	ŀ	 Coarse woody debris >15cm (6i Standing dead >25cm (10in) db 		3	High 4ha (9.88 acres) or more		
	ŀ	Amphibian breeding pools			Microtopography Cover Scale		
	•				Absent		
				1	Present very small amounts or if r of marginal quality	more common	
				2	Present in moderate amounts, bu	t not of highest	
	55.0	TOTAL (Max 100 pts)			quality or in small amounts of high	•	
	2	Category		3	<u> </u>		
		Category		3	Present in moderate or greater ar	nounts	
					and of highest quality		

W-WRL-006-ORAM.xlsx | Quantitative Form 9/26/2022

ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	(0	
	Metric 2. Buffers and surrounding land use	1	2	
	Metric 3. Hydrology	2	24	
	Metric 4. Habitat	1	1	
	Metric 5. Special Wetland Communities	(0	
	Metric 6. Plant communities, interspersion, microtopography	;	8	
	TOTAL SCORE	5	55	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

Wetland ID:	W-WRL-006
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	stions: Wetland is categorized as a Category 3		Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	*YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	*NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
		Final Category	
Ch	oose one Category	1 *Category 2	Category 3



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-006

Date:

September 1, 2022

Description:

PEM

Category 2

Facing North



Wetland W-WRL-006

Date:

September 1, 2022

Description:

PEM

Category 2

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-006

Date:

September 1, 2022

Description:

PEM

Category 2

Facing South



Wetland W-WRL-006

Date:

September 1, 2022

Description:

PEM

Category 2

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-006

Date:

September 1, 2022

Description:

PEM

Category 2

Soil Pit



U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP llesboro 138 kV Project		City/County: Vinton		_Sampling Date:	9/1/22		
Applicant/Owner: AEP			State: OH	Sampling Point:	W-WRL-006-UPL		
Investigator(s): WRL, CRW		Section, Township, Range:	S3 T12N R17W				
Landform (hillside, terrace, etc.): Terrace	Lo	ocal relief (concave, convex,		Slope (%):	5		
Subregion (LRR or MLRA): LRR N	Lat: 39.37703		32.45173		WGS84		
Soil Map Unit Name: WhL1D1: Wharton-Lat			NWI classificat				
Are climatic / hydrologic conditions on the site	e typical for this time of ye	ear? Yes	No X (If no, e	explain in Remark	s.)		
Are Vegetation , Soil , or Hydro	logy significantly d		ircumstances" present?	Yes X	No		
Are Vegetation, Soil, or Hydro			olain any answers in Re	emarks.)	,		
SUMMARY OF FINDINGS – Attach			-		res, etc.		
Lludronhutia Vagatatian Dragont?	Vaa Na V	le the Complet Avec					
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes No X Yes X No	Is the Sampled Area within a Wetland?	Vos	No. Y			
Wetland Hydrology Present?	Yes No X	within a Wetland:	Yes	No X			
Remarks:	103 10 X						
Upland point associated with wetland W-WF hydrophytic vegetation and wetland hydrolog					lacking		
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two r	equired)		
Primary Indicators (minimum of one is required)	red; check all that apply)		Surface Soil Cracl	· ,			
Surface Water (A1)	True Aquatic Plants		Sparsely Vegetate		ce (B8)		
High Water Table (A2)	Hydrogen Sulfide O		Drainage Patterns (B10)				
Saturation (A3)		res on Living Roots (C3)					
Water Marks (B1)	Presence of Reduce		Dry-Season Wate				
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows		, (CO)		
Drift Deposits (B3)	Thin Muck Surface (
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Re	emarks) Stunted or Stressed Plants (D1) Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7	7)		Shallow Aquitard				
Water-Stained Leaves (B9)	,		Microtopographic				
Aquatic Fauna (B13)			FAC-Neutral Test				
Field Observations:				,			
Surface Water Present? Yes	No X Depth (inch	nes):					
Water Table Present? Yes	No X Depth (inch						
Saturation Present? Yes	No X Depth (inch		Hydrology Present?	Yes	No X		
(includes capillary fringe)							
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photo	s, previous inspections), if av	/ailable:				
Remarks:							
No wetland hydrology indicators present.							

$\label{lem:vegetation} \textbf{VEGETATION (Four Strata)} - \textbf{Use scientific names of plants}.$

Tree Stratum (Plot size: 30' r) % 1. Liriodendron tulipifera 2. Carpinus caroliniana 3. 4. 5. 6. 7. 50% of total cover: 23 Sapling/Shrub Stratum (Plot size: 15' r) 1. Rosa multiflora 2. Lindera benzoin 3.		Yes Yes Total Cover of total cover:	FACU FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A Total Number of Dominant Species Across All Strata: 5 (B Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0			
3	45 = 20% (Total Cover	FAC	That Are OBL, FACW, or FAC: 2 (A Total Number of Dominant Species Across All Strata: 5 (B Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A Prevalence Index worksheet: Total % Cover of: Multiply by:			
3	20% (Total Number of Dominant Species Across All Strata: 5 (B Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A Prevalence Index worksheet: Total % Cover of: Multiply by:			
5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5	20% (9	Species Across All Strata: 5 (B Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A Prevalence Index worksheet: Total % Cover of: Multiply by:			
5	20% (9	Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A Prevalence Index worksheet: Total % Cover of: Multiply by:			
5. 50% of total cover: 23 Sapling/Shrub Stratum (Plot size: 15' r) Rosa multiflora Lindera benzoin	20% (9	That Are OBL, FACW, or FAC: 40.0% (A Prevalence Index worksheet: Total % Cover of: Multiply by:			
50% of total cover: 23 Sapling/Shrub Stratum (Plot size: 15' r) Rosa multiflora Lindera benzoin	20% (9	Prevalence Index worksheet: Total % Cover of: Multiply by:			
50% of total cover: 23 Sapling/Shrub Stratum (Plot size: 15' r) Rosa multiflora Lindera benzoin	20% (9	Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 15' r) . Rosa multiflora 2. Lindera benzoin	20% (9				
Sapling/Shrub Stratum (Plot size: 15' r) . Rosa multiflora 2. Lindera benzoin	-	of total cover:	9	I OBI species $0 x1 = 0$			
. Rosa multiflora Lindera benzoin	55						
2. Lindera benzoin	55			FACW species 35 x 2 = 70			
		Yes	FACU	FAC species 35 x 3 = 105			
3.	5	No	FAC	FACU species 100 x 4 = 400			
				UPL species 0 x 5 = 0			
l				Column Totals: 170 (A) 575			
j.				Prevalence Index = B/A = 3.38			
S				Hydrophytic Vegetation Indicators:			
· 				1 - Rapid Test for Hydrophytic Vegetation			
·				2 - Dominance Test is >50%			
). 				3 - Prevalence Index is ≤3.0 ¹			
·	60 -	Total Cover		4 - Morphological Adaptations ¹ (Provide suppor			
			4.0	data in Remarks or on a separate sheet)			
50% of total cover: 30	- 20% (of total cover:	12				
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)			
. Thelypteris palustris	25	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology mu			
2. Boehmeria cylindrica	10	No	FACW	be present, unless disturbed or problematic.			
8. Polystichum acrostichoides	20	Yes	FACU	Definitions of Four Vegetation Strata:			
Persicaria virginiana	10	No	FAC	AC Tree – Woody plants, excluding vines, 3 in. (7.6 cr			
5				more in diameter at breast height (DBH), regardles			
S.				height.			
·				Sapling/Shrub – Woody plants, excluding vines, le			
3.				than 3 in. DBH and greater than or equal to 3.28 ft			
).				(1 m) tall.			
0.				Herb – All herbaceous (non-woody) plants, regardl			
1.				of size, and woody plants less than 3.28 ft tall.			
	65 =	Total Cover		Woody Vine – All woody vines greater than 3.28 ft			
50% of total cover: 33		of total cover:	10	height.			
	20% (n total cover.	13	g			
Voody Vine Stratum (Plot size: 30' r)							
·							
<u> </u>							
3.							
i.				Hydrophytic			
l	<u> </u>	Total Cover		Hydrophytic Vegetation			

Sampling Point: W-WRL-006-UPL

SOIL Sampling Point: w-wrl-006-UPL

		to the dep				ator or c	onfirm the absence	of indicators	s.)	
Depth	Matrix	0/		K Featur		1 2	Tandona		Damani	
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture Learny/Clavey	Diating	Remark	
0-2	2.5Y 4/3	90 70	2.5Y 5/6 2.5Y 5/6	10	<u> </u>	<u>М</u> М	Loamy/Clayey		t redox con	
2-10	2.5Y 6/3			30	<u>C</u>		Sandy	Distille	t redux con	centrations
10-16	2.5Y 5/2	60	2.5Y 5/6	40	<u>C</u>	M	Sandy	-		
¹Type: C=Co	oncentration, D=Depl	letion, RM	=Reduced Matrix, N	/IS=Mas	ked San	d Grains.	² Location	: PL=Pore L	ining, M=M	atrix.
Hydric Soil I			·							Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be	low Su	rface (S8	(MLRA	147, 148)	2 cm Muck (A	(MLRA	147)
Histic Ep	ipedon (A2)		Thin Dark Su	ırface (S	9) (MLR	A 147, 1	48)	Coast Prairie	Redox (A1	6)
Black His	stic (A3)		Loamy Muck					(MLRA 147	7, 148)	
Hydrogei	n Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)		F	Piedmont Flo	odplain Soi	ls (F19)
	Layers (A5)		Depleted Ma					(MLRA 136	6, 147)	, ,
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface	(F6)		F	Red Parent M		1)
Depleted	Below Dark Surface	(A11)	Depleted Da	rk Surfa	ice (F7)			(outside M	LRA 127, 1	47, 148)
Thick Da	rk Surface (A12)		Redox Depre	essions	(F8)		\	ery Shallow	Dark Surfa	ce (F22)
Sandy M	ucky Mineral (S1)		Iron-Mangan	ese Ma	sses (F12	2) (LRR I	N,	Other (Explai	n in Remarl	(S)
Sandy G	leyed Matrix (S4)		MLRA 136	6)						
Sandy R	edox (S5)		Umbric Surfa	ace (F13	B) (MLRA	122, 13	6) 3Indio	cators of hyd	rophytic ve	getation and
X Stripped	Matrix (S6)		Piedmont Flo	odplain	Soils (F	19) (MLR	(A 148) v	vetland hydro	ology must	be present,
Dark Sur	face (S7)		Red Parent I	Material	(F21) (M	LRA 127	', 147, 148)	ınless disturb	oed or probl	ematic.
Restrictive L	ayer (if observed):									
Type:	,									
Depth (in	nches):						Hydric Soil Prese	ent?	res X	No
Remarks:							•			
	dicator present.									

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/2/22	
Applicant/Owner: AEP			State: OF	Sampling Point:	W-WRL-007-PSS	
Investigator(s): WRL, CRW		Section, Township, Range:	S10 T12N R17W			
Landform (hillside, terrace, etc.): Undulatin	g L	_ _ocal relief (concave, convex,		Slope (%):	2	
Subregion (LRR or MLRA): LRR N	Lat: 39.37478		82.45378		WGS84	
Soil Map Unit Name: Bhv1B: Bethesda silt le	oam, 0 to 8 percent slope			fication: PEM1C		
Are climatic / hydrologic conditions on the sit			No X (If n	io, explain in Remark	s)	
Are Vegetation , Soil , or Hydro	-		ircumstances" prese			
Are Vegetation, Soil, or Hydro			plain any answers in			
SUMMARY OF FINDINGS – Attach			-		res, etc.	
Lhudaanhudia Va aatatiaa Daaaant	Vac V Na	In the Commission Area				
Hydrophytic Vegetation Present?	Yes X No No	Is the Sampled Area	Vaa V	No		
Hydric Soil Present? Wetland Hydrology Present?	Yes X No	within a Wetland?	Yes X	No		
Remarks:	163 X 110					
PSS wetland surrounding PUB portion of we hydrophytic vegetation indicator, and hydric		been higher than average with	nin the past 30 days	. Wetland hydrology i	ndicators,	
HYDROLOGY						
Wetland Hydrology Indicators:				ors (minimum of two r	required)	
Primary Indicators (minimum of one is requi			Surface Soil C	, ,		
X Surface Water (A1)	True Aquatic Plant			etated Concave Surfa	ce (B8)	
X High Water Table (A2)	Hydrogen Sulfide (Drainage Patte			
X Saturation (A3)		eres on Living Roots (C3)	Moss Trim Line			
Water Marks (B1)	Presence of Reduc			/ater Table (C2)		
Sediment Deposits (B2)		etion in Tilled Soils (C6)	Crayfish Burro		(0.0)	
Drift Deposits (B3)	Thin Muck Surface	<u> </u>				
Algal Mat or Crust (B4)	Other (Explain in R	Remarks) Stunted or Stressed Plants (D1) X Geomorphic Position (D2)				
Iron Deposits (B5)	7 \					
Inundation Visible on Aerial Imagery (B	(1)		Shallow Aquita			
Water-Stained Leaves (B9) Aquatic Fauna (B13)			Microtopograp			
			X FAC-Neutral T	est (D5)		
Field Observations:	No. Double Co.	.l \. 00				
Surface Water Present? Yes X Water Table Present? Yes X		ches): 36				
	No Depth (inc	ches): 4 Wetland I	Hydrology Present	? Yes X	Na	
Saturation Present? Yes X (includes capillary fringe)	No Depth (inc	vetianu i	nyurology Present	f les	. NO	
Describe Recorded Data (stream gauge, mo	onitoring well, aerial phot	ns previous inspections) if a	vailable.			
Describe Necorded Data (stream gauge, me	ormorning wen, aeriai prior	ios, previous irispections), ir a	valiable.			
Remarks:						
Multiple primary and one secondary wetland	d hydrology indicator pre-	sent.				

VEGETATION (Four Strata) – Use scientific names of plants.

Tron Stratum (Diet size: 20' r	Absolute	Dominant Species?	Indicator	Dominance Test weeksheets			
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:			
1. Salix nigra	10	Yes	OBL	Number of Dominant Species			
2				That Are OBL, FACW, or FAC:4 (A)			
3.				Total Number of Dominant			
4				Species Across All Strata: 4 (B)			
5				Percent of Dominant Species			
6.				That Are OBL, FACW, or FAC:100.0% (A/B)			
7				Prevalence Index worksheet:			
	10	=Total Cover		Total % Cover of: Multiply by:			
50% of total cover: 5	20%	of total cover:	2	OBL species 65 x 1 = 65			
Sapling/Shrub Stratum (Plot size: 15' r)				FACW species 70 x 2 = 140			
1. Salix nigra	50	Yes	OBL	FAC species 28 x 3 = 84			
2. Acer rubrum	3	No	FAC	FACU species 6 x 4 = 24			
3. Rosa multiflora	3	No	FACU	UPL species 0 x 5 = 0			
4				Column Totals: 169 (A) 313 (B)			
5				Prevalence Index = B/A = 1.85			
6.				Hydrophytic Vegetation Indicators:			
7.				1 - Rapid Test for Hydrophytic Vegetation			
8.				X 2 - Dominance Test is >50%			
9.				X 3 - Prevalence Index is ≤3.0 ¹			
	56	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting			
50% of total cover: 28	3 20%	of total cover:	12	data in Remarks or on a separate sheet)			
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)			
Scirpus cyperinus	50	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must			
Conoclinium coelestinum	20	Yes	FAC	be present, unless disturbed or problematic.			
3. Typha latifolia	5	No	OBL	Definitions of Four Vegetation Strata:			
4. Bidens frondosa	5	No	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)			
Panicum dichotomiflorum	10	No	FACW	vocay plants, excidently villes, o in: (7.6 oill)			
Euthamia graminifolia	5	No	FAC	height.			
7. Onoclea sensibilis	5	No	FACW	Continue/Charate Manda and analysis a single			
8.		140	TAOW	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft			
9.				(1 m) tall.			
				Herb – All herbaceous (non-woody) plants, regardless			
10.				of size, and woody plants less than 3.28 ft tall.			
11	400	Total Course					
FOOV of total account FO		=Total Cover	00	Woody Vine – All woody vines greater than 3.28 ft in height.			
50% of total cover: 50	20%	of total cover:	20	neight.			
Woody Vine Stratum (Plot size: 30' r)							
Lonicera japonica	3	No	FACU				
2.							
3.							
4.							
5				Hydrophytic			
	3	=Total Cover		Vegetation			
50% of total cover: 2	20%	of total cover:	1	Present? Yes X No No			
Remarks: (Include photo numbers here or on a sepal Hydrophytic vegetation indicators are present.	rate sheet.)						

Sampling Point: W-WRL-007-PSS

SOIL Sampling Point: w-wrl-007-PSS

Profile Description: (Describe to the depth needed to document the in Depth Matrix Redox Features						ator or c	onfirm the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	2.5Y 5/2	100	Color (moist)	70	Туре		Loamy/Clayey	Nemarks
2-13	2.5Y 5/2	70	2.5Y 5/6	20	С	PL	Loamy/Clayey	Prominent redox concentrations
			10YR 5/8	10	С	PL		Prominent redox concentrations
,								
1Type: C-C	oncentration, D=Dep	lotion PM					² l continu	: PL=Pore Lining, M=Matrix.
		ielion, Kivi	=Reduced Matrix, r	vi3=ivias	skeu San	u Grairis.		•
Hydric Soil I			Daharahaa D		-f (OO	\		cators for Problematic Hydric Soils ³ :
Histosol			Polyvalue Be					2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Thin Dark Si					Coast Prairie Redox (A16)
Black His			Loamy Muck			ILRA 13		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gley		. ,		<u></u> +	Piedmont Floodplain Soils (F19)
	Layers (A5)		X Depleted Ma	, ,			_	(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark				<u></u>	Red Parent Material (F21)
	Below Dark Surface	e (A11)	Depleted Da		. ,			(outside MLRA 127, 147, 148)
	rk Surface (A12)		Redox Depr			 -		/ery Shallow Dark Surface (F22)
	ucky Mineral (S1)		Iron-Mangar		sses (F1	2) (LRR I	N,(Other (Explain in Remarks)
	leyed Matrix (S4)		MLRA 130					
	edox (S5)		Umbric Surfa					cators of hydrophytic vegetation and
	Matrix (S6)		Piedmont Fl					vetland hydrology must be present,
Dark Sur	face (S7)		Red Parent	Material	(F21) (M	LRA 127	', 147, 148) և	unless disturbed or problematic.
Restrictive L	_ayer (if observed):							
Type:								
Depth (in	nches):						Hydric Soil Prese	ent? Yes X No
Remarks:								
Hydric soil in	dicator present.							
•								
ı								
ı								
1								

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/2/22	
Applicant/Owner: AEP			State: OH	Sampling Point:	W-WRL-007-PUB	
Investigator(s): WRL, CRW		Section, Township, Range:	S10 T12N R17W	_		
Landform (hillside, terrace, etc.): Depression	n Lo	ocal relief (concave, convex,		Slope (%):	0	
Subregion (LRR or MLRA): LRR N	Lat: 39.37490		32.45378	Datum:	WGS84	
Soil Map Unit Name: Bhv1B: Bethesda silt lo			NWI classificat	tion: PEM1C		
Are climatic / hydrologic conditions on the site	e typical for this time of ve	ear? Yes	No X (If no, e	explain in Remark	s.)	
Are Vegetation, Soil, or Hydro			ircumstances" present?			
Are Vegetation, Soil, or Hydro			plain any answers in Re			
SUMMARY OF FINDINGS – Attach	· <u></u>		-		res, etc.	
				<u> </u>		
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area				
Hydric Soil Present?	Yes X No	within a Wetland?	Yes X	No		
Wetland Hydrology Present?	Yes X No					
Remarks: PUB/ open water portion of weltand W-WRL hydrophytic vegetation indicator, and hydric		een higher than average withi	n the past 30 days. We	etland hydrology i	ndicators,	
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two	required)	
Primary Indicators (minimum of one is required)	red; check all that apply)		Surface Soil Cracl	. ,		
X Surface Water (A1)	X True Aquatic Plants		Sparsely Vegetate	ed Concave Surfa	ce (B8)	
X High Water Table (A2)	X Hydrogen Sulfide O		Drainage Patterns	s (B10)		
X Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines (B16)			
Water Marks (B1)	Presence of Reduce					
Sediment Deposits (B2)	Recent Iron Reducti	on in Tilled Soils (C6)	Crayfish Burrows			
Drift Deposits (B3)	Thin Muck Surface (
Algal Mat or Crust (B4)	Other (Explain in Re	emarks)	Stunted or Stresse			
Iron Deposits (B5)			X Geomorphic Posit			
X Inundation Visible on Aerial Imagery (B7	7)		Shallow Aquitard			
Water-Stained Leaves (B9)			Microtopographic			
X Aquatic Fauna (B13)			X FAC-Neutral Test	(D5)		
Field Observations:						
Surface Water Present? Yes X	No Depth (inch					
Water Table Present? Yes X	No Depth (inch					
Saturation Present? Yes X	No Depth (inch	nes): 0 Wetland H	Hydrology Present?	Yes X	. No	
(includes capillary fringe)						
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photo	s, previous inspections), if av	railable:			
Remarks:						
Multiple primary wetland hydrology indicator	s present.					

VEGETATION (Four Strata) – Use scientific names of plants.

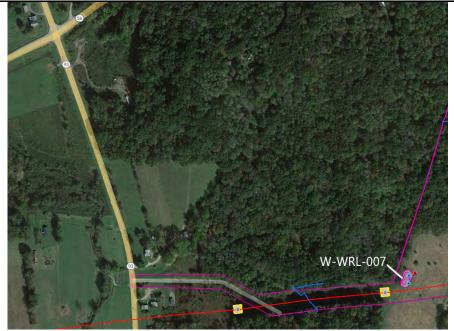
ee Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status	1		
		ороскос.	Status	Dominance Test worksheet:		
				Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
				Total Number of Dominant Species Across All Strata:	1	(B)
				Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B
				Prevalence Index worksheet:		<u>`</u>
		=Total Cover		Total % Cover of:	Multiply by:	
50% of total cover:		of total cover:		OBL species 60 x 1		_
apling/Shrub Stratum (Plot size: 15' r)	0. 1010. 0010		FACW species 0 x 2		_
VI IST SIZE.	,			FAC species 0 x 3		—
						—
						—
				UPL species 0 x 5		—
				Column Totals: 60 (A)	60	(
				Prevalence Index = B/A		_
				Hydrophytic Vegetation Indicate	ors:	
				1 - Rapid Test for Hydrophytic	Vegetation	
				X 2 - Dominance Test is >50%		
				X 3 - Prevalence Index is ≤3.0 ¹		
		=Total Cover		4 - Morphological Adaptations	1 (Provide supp	port
50% of total cover:	20%	of total cover:		data in Remarks or on a se	parate sheet)	
erb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vege	etation¹ (Explai	in)
Brasenia schreberi	60	Yes	OBL	¹ Indicators of hydric soil and wetla		
				be present, unless disturbed or pro		
				Definitions of Four Vegetation S	strata:	
				Tree – Woody plants, excluding vi more in diameter at breast height height.		
				l noight.		
				Sapling/Shrub – Woody plants, e		
				than 3 in. DBH and greater than o	r equal to 3.28	ft
				(1 m) tall.		
				Herb – All herbaceous (non-wood of size, and woody plants less tha		rdle
		=Total Cover of total cover:	12	Woody Vine – All woody vines graheight.	eater than 3.28	3 ft i
oody Vine Stratum (Plot size: 30' r)						
· · ·						
-						
				Hydrophytic		
		=Total Cover		Vegetation		
50% of total cover:	20%	of total cover:		Present? Yes X	No	
emarks: (Include photo numbers here or on a sep drophytic vegetation indicator present.	arate sheet.)					

SOIL Sampling Point: w-wrl-007-PUB

Profile Des	cription: (Describe t	o the depth n	eeded to doci	ument th	he indica	tor or co	onfirm the abso	ence of indi	cators.)	
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	% C	olor (moist)	%	Type ¹	Loc ²	Texture		Remark	s
¹ Typo: C=C	oncentration, D=Depl	otion PM-Poo	ducad Matrix N		kod Sand	Craine	21.0	cation: DI =	Pore Lining, M=M	otriv
Hydric Soil		etion, Kivi=Ket	Juceu Mairix, N	/IO=IVIAS	Keu Sanc	Giailis.	LO		for Problematic	
-			Dobarokio Br	alaw Cur	face (CO)	/MI DA	447 440\			=
Histoso			Polyvalue Be						uck (A10) (MLRA	
	pipedon (A2)		_ Thin Dark Su						Prairie Redox (A1	0)
	istic (A3)		_Loamy Muck	-		ILKA 130	·)	•	A 147, 148)	lo (F10)
	en Sulfide (A4)		_Loamy Gleye		. ,				nt Floodplain Soi	IS (F19)
	d Layers (A5) uck (A10) (LRR N)	_	Depleted Ma Redox Dark						A 136, 147)	1)
	d Below Dark Surface		Depleted Da		, ,				rent Material (F2 ⁻ ide MLRA 127, 1	
	ark Surface (A12)		Redox Depre		` '				nallow Dark Surfa	
	Mucky Mineral (S1)	_	Iron-Mangan		. ,) (I RR N	ı		Explain in Remar	
	Gleyed Matrix (S4)		MLRA 136		3303 (1 12	-) (- IXIX I	•,			(3)
	Redox (S5)		Umbric Surfa		MIRA	122 136	;)	³ Indicators of	of hydrophytic ve	netation and
	d Matrix (S6)		Piedmont Flo						hydrology must	-
	rface (S7)		Red Parent N						disturbed or prob	
			_ Ned Falenti	vialeriai	(1 Z 1) (141	LNA 121	, 147, 140)	uriless (disturbed of prob	emanc.
	Layer (if observed):									
Type:								.	.	
Depth (i	ncnes):						Hydric Soil	Present?	Yes X	No
Remarks:										
No soil pit d	ug. Hydric by definition	n 3.B.; hydric s	oil indicator pr	esent.						

Background Information				
Name:	B. Leopold and C.Wyse			
Date:	9/2/2022			
Affiliation:	AECOM			
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202			
Phone Number:	859-640-5603			
e-mail address:	Bill.Leopold@aecom.com			
Name of Wetland:	W-WRL-007			
Vegetation Communit(ies):	PSS/PUB			
HGM Class(es):	DEPRESSION			

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate:	39.37478, -82.45378
USGS Quad Name:	Zaleski
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	Brushy Fork (HUC: 050901010203)
Site Visit:	9/2/2022
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-WRL-007		
Wetland Size (delineated acres):	0.11	Wetland Size (Estimated total acres):	0.11

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

N 👍



Comments, Narrative Discussion, Justification of Category Changes:

PSS wetland surrounding PUB portion of wetland. Precipitation has been higher than average within the past 30 days. Wetland hydrology indicators, hydrophytic vegetation indicator, and hydric soil indicator present. PUB/ open water portion of weltand W-WRL-007. Precipitation has been higher than average within the past 30 days. Wetland hydrology indicators, hydrophytic vegetation indicator, and hydric soil indicator present. Soil map unit indicated 'reclaimed' soils.

Final score:	57	Category:	2

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	Х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	Х	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh? Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a YES Go to Question 9b	*NO Go to Question 9a *NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	*NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	*NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	*NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	*NO Complete Quantitative Rating

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Vetland ID: W-WRL-007		
ite: AEP llesboro 138 kV Project Rater(s): B. Leopolo	and C.Wyse	Date: 9/2/2022
	Field ID:	•
1.0 Metric 1. Wetland Area (size). Select one size class and assign score.	W-WRL-007	
>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)	Delineated acres:	0.11
3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)	Total acres:	0.11
 <0.1 acres (0.04ha) (0 pts) 6.0 7.0 Metric 2. Upland buffers and surrou 	unding land use	
2a. Calculate average buffer width. Select only one at WIDE. Buffers average 50m (164ft) or more around wetle MEDIUM. Buffers average 25m to <50m (82 to <164ft) at X NARROW. Buffers average 10m to <25m (32ft to <82ft); at VERY NARROW. Buffers average 10m (<32ft) around to 2b. Intensity of surrounding land use. Select one or or X VERY LOW. 2nd growth or older forest, prairie, savannal LOW. Old field (>10 years), shrubland, young second growth or older forest, prairie, savannal LOW. Old Field (>10 years), shrubland, fenced pasture, park, HIGH. Urban, industrial, open pasture, row cropping, min	and assign score. Do not double check. and perimeter (7) round wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) louble check and average. n, wildlife area, etc. (7) with forest. (5) conservation tillage, new fallow field. (3)	
21.0 28.0 Metric 3. Hydrology.	,	
3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. X >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score None or none apparent (12) X Recovered (7) Recovering (3) Recent or no recovery (1)	x Semi- to permanently inundate Regularly inundated/saturated Seasonally inundated (2) Seasonally saturated in upper in one or double check and average. Check all disturbances observable ditch title dike weir stormwater input	r human use (1) est), complex (1) lor (1) ration. Score one or dbl check. d/saturated (4) (3) 30cm (12in) (1)
18.0 46.0 Metric 4. Habitat Alteration and Dev (20 pts. subtotal 4a. Substrate disturbance. Score one or double chec	•	
None or none apparent (4) x Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign Excellent (7) x Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and x None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	score.	shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment

ORAM v. 5.0 Field Form Quantitative Rating

Wetla	and ID:	W-WRL-007					
Site:	AFP lleshoro	138 kV Project	Rater(s):	R I	eopold and C.Wyse	Date:	9/2/2022
Oito.	7121 11000010	100 KV 1 Tojout	rtator(b).	D. L	copoia ana o.vvysc	Dato.	0/2/2022
					Field ID:		
	46.0				W-WRL-007		
	subtotal this page						
	20 40 0	Marketo E. Ourestollado	41				
	0.0 46.0	Metric 5. Special We					
max 10 pts.	subtotal	Check all that apply and [Bog (10)	score as indicated.				
		Fen (10)					
	<u> </u>	Old growth forest (10) Mature forested wetland (5)					
		Lake Erie coastal/tributary wetlar		0)			
	<u> </u>	Lake Erie coastal/tributary wetlar Lake Plain Sand Prairies (Oak O					
		Relict Wet Praires (10)					
		Known occurrence state/federal f Significant migratory songbird/wa			0)		
		Category 1 Wetland. See Questi					
11	1.0 57.0	Metric 6. Plant comn	•				
max 20pts.	subtotal	6a. Wetland Vegetation (Score all present using 0 to 3 sca			Vegetation Community (Absent or comprises <0.1ha (0.24		
	0	Aquatic bed	ale.		Present and either comprises sma		
		Emergent			vegetation and is of moderate qua		
	2	Shrub Forest			significant part but is of low quality Present and either comprises sign		
		Mudflats			vegetation and is of moderate qua		
	0	Open water Other			part and is of high quality Present and comprises significant	nart or more of wetland's 3	
	<u> </u>	6b. horizontal (plan view) Inter	spersion.		vegetation and is of high quality	part, or more, or wettaria so	
		Select only one. High (5)			Narrative Description of Vegeta	tion Quality	
	х	Moderately high(4)			Low spp diversity and/or predomin		
		Moderate (3) Moderately low (2)			disturbance tolerant native specie		
		Low (1)			Native spp are dominant compone although nonnative and/or disturb		
		None (0)			can also be present, and species		
		6c. Coverage of invasive plants Table 1 ORAM long form for list.			moderately high, but generallyw/o threatened or endangered spp to	presence of rare	
		or deduct points for coverage			A predominance of native species		
		Extensive >75% cover (-5) Moderate 25-75% cover (-3)			and/or disturbance tolerant native absent, and high spp diversity and		
		Sparse 5-25% cover (-1)			the presence of rare, threatened,		
	Y	Nearly absent <5% cover (0) Absent (1)			Mudflat and Open Water Class	Quality	
	_ ^	6d. Microtopography.		0	Absent < 0.1ha (0.247 acres)		
	1	Score all present using 0 to 3 sca Vegetated hummucks/tussucks	ale.		Low 0.1 to <1ha (0.247 to 2.47 ac Moderate 1 to <4ha (2.47 to 9.88		
	0	Coarse woody debris >15cm (6ir	n)		High 4ha (9.88 acres) or more	acres)	
		Standing dead >25cm (10in) dbh	1		Microtonography Cover Saala		
	3	Amphibian breeding pools			Microtopography Cover Scale Absent		
					Present very small amounts or if r	nore common	
					of marginal quality Present in moderate amounts, bu	t not of highest	
	57.0 TO	TAL (Max 100 pts)			quality or in small amounts of high	•	
	2 Cat	egory		-	Present in moderate or greater an	· · ·	
					and of highest quality		

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		1	
	Metric 2. Buffers and surrounding land use	(6	
	Metric 3. Hydrology	2	21	
	Metric 4. Habitat	1	.8	
	Metric 5. Special Wetland Communities	(0	
	Metric 6. Plant communities, interspersion, microtopography	1	.1	
	TOTAL SCORE	5	7	Category based on score breakpoints 2

 $Complete\ Wetland\ Categorization\ Worksheet.$

Wetland ID:	W-WRL-007
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745–1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	*YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	*NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
			•
		Final Catego	ry



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-007

Date:

September 2, 2022

Description:

PSS

Category 2

Facing North



Wetland W-WRL-007

Date:

September 2, 2022

Description:

PSS

Category 2

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-007

Date:

September 2, 2022

Description:

PSS

Category 2

Facing South



Wetland W-WRL-007

Date:

September 2, 2022

Description:

PSS

Category 2

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-007

Date:

September 2, 2022

Description:

PSS

Category 2

Soil Pit



Wetland W-WRL-007

Date:

September 2, 2022

Description:

PUB

Category 2

Facing North





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-007

Date:

September 2, 2022

Description:

PUB

Category 2

Facing South



Wetland W-WRL-007

Date:

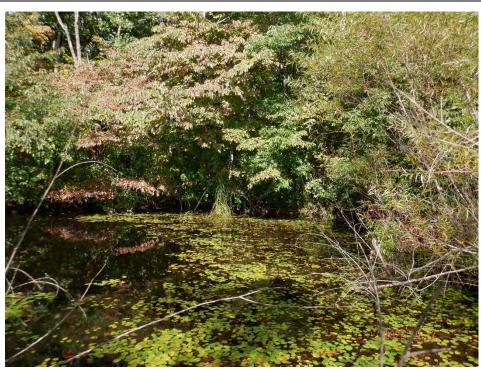
September 2, 2022

Description:

PUB

Category 2

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-007

Date:

September 2, 2022

Description:

PUB

Category 2

Soils



U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP llesboro 138 kV Project	City/County: Vinton Sampling Date: 9/2/22				
Applicant/Owner: AEP	State: OH Sampling Point: w-wrl-007-UPL				
Investigator(s): WRL, CRW	Section, Township, Range: S10 T12N R17W				
	ocal relief (concave, convex, none): None Slope (%): 5				
Subregion (LRR or MLRA): LRR N Lat: 39.37494	Long: -82.45365 Datum: WGS84				
Soil Map Unit Name: Bhv1B: Bethesda silt loam, 0 to 8 percent slope					
Are climatic / hydrologic conditions on the site typical for this time of year					
Are Vegetation, Soil, or Hydrology significantly d					
Are Vegetation, Soil, or Hydrologynaturally prob	olematic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X				
Wetland Hydrology Present? Yes No X					
	nabitat across from mowed path that surrounds the wetland. Hydrophytic ology indicators. Precipitation has been higher than average within the past 30				
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1)True Aquatic Plants					
High Water Table (A2) Hydrogen Sulfide O					
	eres on Living Roots (C3)Moss Trim Lines (B16)				
Water Marks (B1) Presence of Reduct	<u> </u>				
Sediment Deposits (B2) Recent Iron Reduct Drift Deposits (B3) Thin Muck Surface	n in Tilled Soils (C6) Crayfish Burrows (C8) 7) Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4) Other (Explain in Re	· · · · · · · · · · · · · · · · · · ·				
Iron Deposits (B5)	Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)				
Water-Stained Leaves (B9)	Microtopographic Relief (D4)				
Aquatic Fauna (B13)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No X Depth (inch	nes):				
Water Table Present? Yes No X Depth (inch	nes):				
Saturation Present? Yes No X Depth (inch	hes): Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:				
Remarks:					
No wetland hydrology indicators present.					

VEGETATION (Four Strata) – Use scientific names of plants.

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.				Number of Dominant Species
2.				That Are OBL, FACW, or FAC:3(A)
3.				Total Number of Dominant
4.				Species Across All Strata: 5 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 60.0% (A/B)
7				Prevalence Index worksheet:
	:	=Total Cover		Total % Cover of: Multiply by:
50% of total cover:	20%	of total cover:		OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size:15' r)				FACW species 23 x 2 = 46
1				FAC species 30 x 3 = 90
2				FACU species 50 x 4 = 200
3.				UPL species 0 x 5 = 0
4.				Column Totals: 103 (A) 336 (B)
5.				Prevalence Index = B/A = 3.26
6.				Hydrophytic Vegetation Indicators:
7.		<u> </u>		1 - Rapid Test for Hydrophytic Vegetation
8.				X 2 - Dominance Test is >50%
9.				3 - Prevalence Index is ≤3.0 ¹
		=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20%	of total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Phleum pratense	30	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
2. Festuca rubra	15	Yes	FACU	be present, unless disturbed or problematic.
3. Vernonia gigantea	15	Yes	FAC	Definitions of Four Vegetation Strata:
4. Panicum dichotomiflorum	20	Yes	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Desmodium canadense	15	Yes	FAC	more in diameter at breast height (DBH), regardless of
6. Asclepias verticillata	5	No	FACU	height.
7. Agrimonia parviflora	3	No	FACW	Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11	103	=Total Cover		
E09/ of total cover: E			21	Woody Vine – All woody vines greater than 3.28 ft in height.
	2 20%	of total cover:		
Woody Vine Stratum (Plot size: 30' r)				
1.				
2				
3.				
4				
5				Hydrophytic
		=Total Cover		Vegetation
50% of total cover:	20%	of total cover:		Present? Yes X No No
Remarks: (Include photo numbers here or on a separated Hydrophytic vegetation indicator present.	rate sheet.)			

Sampling Point: W-WRL-007-UPL

SOIL Sampling Point: W-WRL-007-UPL

Profile Desci	ription: (Describe t	o the dep	th needed to docu	ıment t	he indica	tor or c	onfirm the abs	ence of indic	ators.)		
Depth	Matrix			k Featur	res						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture		Rem	arks	
0-6	10YR 4/3	100					Loamy/Claye	Э у			
6-10	10YR 4/4	100					Loamy/Claye	<u></u>			
10-16	10YR 5/6	100					Loamy/Claye	э у			
		—									
¹ Tunor C. Co	ncentration, D=Deple	tion DM	Doduced Metrix N		ulcad Can	Croine	21.0	cation: PL=P	oro Linina N	1 Motrix	
Hydric Soil I		euon, Rivi	=Reduced Matrix, N	/IS=IVIAS	sked Sand	diams.	LO	Indicators for			Soils ³ :
-			Dobarduo Pe	dow Cui	rfano (CO)	/MI DA	147 140)			-	Solis :
Histosol (Polyvalue Be						ck (A10) (MI		
	pedon (A2)		Thin Dark Su						airie Redox	(A16)	
Black His			Loamy Muck			ILRA 13	b)		147, 148)	0-11- (540	`
	Sulfide (A4)		Loamy Gleye						t Floodplain	Soils (F19)
	Layers (A5)		Depleted Ma						136, 147)	(504)	
	ck (A10) (LRR N)	(0.4.4)	Redox Dark						ent Material		0)
	Below Dark Surface	(A11)	Depleted Da		` '				de MLRA 12		-
	rk Surface (A12) ucky Mineral (S1)		Redox Depre			o) // DD /	NI.		allow Dark S		∠)
	eyed Matrix (S4)		MLRA 136		5562 (L 17	2) (LKK I	٧,	Other (E	xplain in Rer	ilaiks)	
	edox (S5)		Umbric Surfa		2) (MI DA	122 12	e)	³ Indicators of	f bydrophytic	voqotatio	a and
	Matrix (S6)		Piedmont Flo						hydrology m	_	
				•	•	, ·	•				
Dark Surf			Red Parent I	viateriai	(FZ1) (IVI	LKA 12/	, 147, 148) T	uniess a	isturbed or p	robiematic	
	ayer (if observed):										
Type:											
Depth (in	ches):						Hydric Soil	Present?	Yes	No_	<u>X</u>
Remarks:											
No hydric soil	indicator present.										

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP llesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/2/22		
Applicant/Owner: AEP			State: OH	Sampling Point:	W-WRL-008		
Investigator(s): WRL, CRW		Section, Township, Range:	S10 T12N R17W	_			
Landform (hillside, terrace, etc.): Depression	on Lo	ocal relief (concave, convex,		Slope (%):	5		
Subregion (LRR or MLRA): LRR N	Lat: 39.37559		32.44450	Datum:	WGS84		
Soil Map Unit Name: WhL1D1: Wharton-Lat			NWI classificat		VV C C C T		
Are climatic / hydrologic conditions on the site	e typical for this time of ye	ar? Yes	No X (If no, e	explain in Remark	s.)		
Are Vegetation, Soil, or Hydro			ircumstances" present?				
Are Vegetation, Soil, or Hydro			plain any answers in Re				
SUMMARY OF FINDINGS – Attach			•		res, etc.		
Hadron karia Wanatatian Barana (0	V V N-	In the Country of Augus		-			
Hydrophytic Vegetation Present?	Yes X No No	Is the Sampled Area	Vaa V	N			
Hydric Soil Present? Wetland Hydrology Present?	Yes X No No	within a Wetland?	Yes <u>X</u>	No			
Remarks:	Tes X NO						
PEM wetland- a depression on a hillside witl indicators, hydrophytic vegetation indicator,			within the past 30 days	. Wetland hydrolc	gy		
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two	required)		
Primary Indicators (minimum of one is required)	red; check all that apply)		Surface Soil Crack	, ,			
X Surface Water (A1)	True Aquatic Plants		Sparsely Vegetated Concave Surface (B8)				
X High Water Table (A2)	Hydrogen Sulfide O		Drainage Patterns (B10)				
X Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduce						
Sediment Deposits (B2)		luction in Tilled Soils (C6) Crayfish Burrows (C8)					
Drift Deposits (B3)	Thin Muck Surface (/ (C9)		
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Re	iliaiks)	Stunted or Stressed Plants (D1) X Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7	Shallow Aquitard (D3)						
Water-Stained Leaves (B9)	,		Microtopographic				
Aquatic Fauna (B13)			X FAC-Neutral Test				
Field Observations:				,			
Surface Water Present? Yes X	No Depth (inch	nes): 12					
Water Table Present? Yes X	No Depth (inch						
Saturation Present? Yes X	No Depth (inch		Hydrology Present?	Yes X	No		
(includes capillary fringe)					,		
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photo	s, previous inspections), if av	/ailable:				
Remarks:			-				
Multiple primary and one secondary wetland	hydrology indicator prese	ent.					

VEGETATION (Four Strata) – Use scientific names of plants.

T 0: (Di : 00)	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 30' r) 1.	% Cover	Species?	Status	Dominance Test worksheet:		
2.				Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)		
3.						
4.				Total Number of Dominant Species Across All Strata: 3 (B)		
5.				`` `		
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)		
7.				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: Multiply by:		
50% of total cover:	20%	of total cover:		OBL species 15 x 1 = 15		
Sapling/Shrub Stratum (Plot size: 15' r)			FACW species 60 x 2 = 120		
1. Acer rubrum	2	No	FAC	FAC species 22 x 3 = 66		
2.				FACU species 5 x 4 = 20		
3.				UPL species 0 x 5 = 0		
4.				Column Totals: 102 (A) 221 (B)		
5.				Prevalence Index = B/A = 2.17		
6.				Hydrophytic Vegetation Indicators:		
7.				1 - Rapid Test for Hydrophytic Vegetation		
8				X 2 - Dominance Test is >50%		
9.				X 3 - Prevalence Index is ≤3.0 ¹		
	2 :	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting		
50% of total cover:	1 20%	of total cover:	1	data in Remarks or on a separate sheet)		
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)		
Persicaria pensylvanica	30	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must		
2. Persicaria amphibia	15	No	OBL	be present, unless disturbed or problematic.		
3. Scirpus cyperinus	10	No	FACW	Definitions of Four Vegetation Strata:		
4. Echinochloa muricata	20	Yes	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or		
5. Dichanthelium clandestinum	20	Yes	FAC	more in diameter at breast height (DBH), regardless of		
6. Apocynum cannabinum	5	No	FACU	height.		
7				Sapling/Shrub – Woody plants, excluding vines, less		
8				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
9						
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
11						
500/ /		=Total Cover	00	Woody Vine – All woody vines greater than 3.28 ft in height.		
	20%	of total cover:	20	Height.		
Woody Vine Stratum (Plot size: 30' r)						
1						
2.						
3						
4 5.						
J		=Total Cover		Hydrophytic		
50% of total cover:		of total cover:		Vegetation Present? Yes X No		
		oi total cover.		Present?		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)					
Hydrophytic vegetation indicators present.						

Sampling Point: W-WRL-008

SOIL Sampling Point: W-WRL-008

Profile Desc	ription: (Describe t	o the dep	th needed to doc	ument t	he indica	ator or c	onfirm the absence o	of indicators.)
Depth	Matrix	 .		x Featur		. 2		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	7.5YR 3/4	100					Sandy	
6-8	7.5YR 2.5/2	100					Loamy/Clayey	
8-14	7.5YR 5/2	70	7.5YR 6/6	30	<u>C</u>	M	Loamy/Clayey	Prominent redox concentrations
1Typo: C-Co	ncentration, D=Depl	otion PM	-Poducod Matrix	 MS_Mac	kod San	d Grains	² l ocation	 : PL=Pore Lining, M=Matrix.
Hydric Soil I	·	elion, Kivi-	=Reduced Matrix,	IVIO=IVIAS	keu San	u Grairis.		ators for Problematic Hydric Soils ³ :
Histosol (Polyvalue B	alow Sur	face (S8) (MI RA		cm Muck (A10) (MLRA 147)
	pedon (A2)		Thin Dark S				· · · · · · · · · · · · · · · · · · ·	Coast Prairie Redox (A16)
Black His			Loamy Muc					(MLRA 147, 148)
	Sulfide (A4)		Loamy Gley			ILIXA IS		riedmont Floodplain Soils (F19)
	Layers (A5)		X Depleted Ma				—'	(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark				R	ted Parent Material (F21)
	Below Dark Surface	(Δ11)	Depleted Da				<u>—</u> '`	(outside MLRA 127, 147, 148)
	rk Surface (A12)	(/////	Redox Depr		. ,		V	ery Shallow Dark Surface (F22)
	ucky Mineral (S1)		Iron-Mangai			2) (I RR I		Other (Explain in Remarks)
	eyed Matrix (S4)		MLRA 13		0000 (1 1	_, (_	" — °	and (Explain in Romano)
	edox (S5)		Umbric Surf	•) (MLRA	122. 13	6) ³ Indic	ators of hydrophytic vegetation and
	Matrix (S6)		Piedmont Fl	`	, .			vetland hydrology must be present,
Dark Sur			Red Parent					nless disturbed or problematic.
	ayer (if observed):				()			
Type:	, (
Depth (in	ches):						Hydric Soil Prese	nt? Yes <u>X</u> No
Remarks:	<u> </u>						•	
Hydric soil inc	dicator present.							

Background Information				
Name:	B. Leopold and C.Wyse			
Date:	9/2/2022			
Affiliation:	AECOM			
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202			
Phone Number:	859-640-5603			
e-mail address:	Bill.Leopold@aecom.com			
Name of Wetland:	W-WRL-008			
Vegetation Communit(ies):	PEM			
HGM Class(es):	DEPRESSION			

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



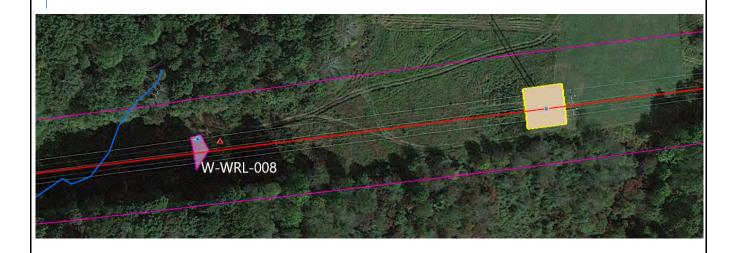


Lat/Long or UTM Coordinate:	39.37559, -82.44450
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	Brushy Fork (HUC: 050901010203)
Site Visit:	9/2/2022
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-WRL-008		
Wetland Size (delineated acres):	0.01	Wetland Size (Estimated total acres):	0.01

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

N 🗸



Comments, Narrative Discussion, Justification of Category Changes:

PEM wetland- a depression on a hillside within ROW. Precipitation has been higher than average within the past 30 days. Wetland hydrology indicators, hydrophytic vegetation indicator, and hydric soil indicator present.

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	x	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

9a	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh? Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a YES Go to Question 9b	*NO Go to Question 9a *NO Go to Question 10	
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	*NO Go to Question 9c	
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	*NO Go to Question 10	
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e	
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	*NO Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	*NO Complete Quantitative Rating	

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Wetland ID:	W-WRL-008			
Site: AEP IIe	esboro 138 kV Project	Rater(s): B. Leope	old and C.Wyse	Date: 9/2/2022
0.01	0.0 Metric 1. Wetla	nd Area (size).	Field ID:	
max 6 pts subtotal	Select one size class a	` '		
	>50 acres (>20.2ha) (6 25 to <50 acres (10.1 to			1
	10 to <25 acres (4 to <1 3 to <10 acres (1.2 to <	10.1ha) (4 pts)	Delineated acres:	0.01
	0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04 to <0.1 acres (0.04ha) (0 p	<1.2ha) (2pts) to <0.12ha) (1 pt)	Total acres:	0.01
8.0	8.0 Metric 2. Uplan	nd buffers and surr	ounding land use.	
max 14 pts. subtotal	WIDE. Buffers average x MEDIUM. Buffers avera NARROW. Buffers avera VERY NARROW. Buffe	50m (164ft) or more around wage 25m to <50m (82 to <164frage 10m to <25m (32ft to <82rs average <10m (<32ft) arou	ft) around wetland perimeter (4) 2ft) around wetland perimeter (1) ind wetland perimeter (0)	
	VERY LOW. 2nd growth x LOW. Old field (>10 yea x MODERATELY HIGH. I	h or older forest, prairie, savar ars), shrubland, young second	d growth forest. (5) park, conservation tillage, new fallow field. (3)	
12.0 2	20.0 Metric 3. Hydro	ology.		
max 30 pts. subtotal	3a. Sources of Water. High pH groundwater (5) Other groundwater (3) x Precipitation (1) Seasonal/Intermittent st Perennial surface water 3c. Maximum water de >o.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27. x <0.4m (<15.7in) (1) 3e. Modifications to na None or none apparent x Recovered (7) Recovering (3) Recent or no recovery (urface water (3) (flake or stream) (5) opth. Select one. 6in) (2) atural hydrologic regime. So (12)	3b. Connectivity. Score all t 100 year floodplain (1) Between stream/lake and oth X Part of wetland/upland (e.g. fc Part of riparian or upland corr 3d. Duration inundation/sat Semi- to permanently inundate Regularly inundated/Saturatec X Seasonally inundated (2) Seasonally saturated in upper core one or double check and average. Check all disturbances obs ditch tile dike weir stormwater input	er human use (1) prest), complex (1) idor (1) uration. Score one or dbl check. ed/saturated (4) 1 (3) r 30cm (12in) (1)
8.0 2	8.0 Metric 4. Habita	at Alteration and D	evelopment.	
max 20 pts. subtotal	None or none apparent Recovered (3) x Recovering (2) Recent or no recovery (4b. Habitat developme Excellent (7) Very good (6) Good (5) Moderately good (4) x Fair (3) Poor to fair (2) Poor (1)	(9)	and average. Check all disturbances obsen	ved x shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment

28.0 subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

W-WRL-008-ORAM.xlsx | Quantitative Form

100 (1		T					
Wetla	nd ID:	W-WRL-008					
Cito	AED Iloshor	o 129 k\/ Project	Potor(s):	Ь	Lagrand and C Wyse	Date:	9/2/2022
Site:	AEF IIESDOIG	o 138 kV Project	Rater(s):	D.	Leopold and C.Wyse	Date.	9/2/2022
					Field ID:		
	28.0				W-WRL-008		
	subtotal this page						
0.	.0 28.0	Metric 5. Special We					
max 10 pts.	subtotal	Check all that apply and	I score as indicated.				
		Bog (10) Fen (10)					
		Old growth forest (10)					
		Mature forested wetland (5)		40)			
		Lake Erie coastal/tributary wetlar Lake Erie coastal/tributary wetlar		10)			
		Lake Plain Sand Prairies (Oak O					
		Relict Wet Praires (10)			(4.0)		
		Known occurrence state/federal Significant migratory songbird/wa			(10)		
		Category 1 Wetland. See Questi					
_							
6.	.0 34.0	Metric 6. Plant comn	nunities, interspe	rsior	, microtopography.		
max 20pts.	subtotal	6a. Wetland Vegetation 0	Communities.		Vegetation Community C	Cover Scale	
		Score all present using 0 to 3 sc	ale.	0	Absent or comprises <0.1ha (0.24		
	0			1	Present and either comprises sma		
		Emergent Shrub			vegetation and is of moderate qua significant part but is of low quality		
		Forest		2			
		Mudflats			vegetation and is of moderate qua	lity or comprises a small	
		Open water Other		3	part and is of high quality Present and comprises significant	part or more of wetland's 3	
		6b. horizontal (plan view) Inter	rspersion.		vegetation and is of high quality	,,,	
	-	Select only one.			N		
		High (5) Moderately high(4)			Narrative Description of Vegeta Low spp diversity and/or predomin		
		Moderate (3)			disturbance tolerant native species	3	
		Moderately low (2)			Native spp are dominant compone		
	<u> </u>	Low (1) None (0)			although nonnative and/or disturbation also be present, and species		
		6c. Coverage of invasive plant			moderately high, but generallyw/o		
		Table 1 ORAM long form for list. or deduct points for coverage	Add		threatened or endangered spp to A predominance of native species	with poppotive and high	
		Extensive >75% cover (-5)			and/or disturbance tolerant native		
		Moderate 25-75% cover (-3)			absent, and high spp diversity and	often, but not always,	
		Sparse 5-25% cover (-1)			the presence of rare, threatened,	or endangered spp	
	×	Nearly absent <5% cover (0) Absent (1)			Mudflat and Open Water Class (Quality	
	<u></u>	6d. Microtopography.		0	Absent < 0.1ha (0.247 acres)		
		Score all present using 0 to 3 sc	ale.	1_	Low 0.1 to <1ha (0.247 to 2.47 ac		
		Vegetated hummucks/tussucks Coarse woody debris >15cm (6ir	n)	3	Moderate 1 to <4ha (2.47 to 9.88 a High 4ha (9.88 acres) or more	acres)	
	0	Standing dead >25cm (10in) dbh					
	2	Amphibian breeding pools		0	Microtopography Cover Scale Absent		
				1	Present very small amounts or if n	nore common	
					of marginal quality		
_	245			2	Present in moderate amounts, but	· ·	
		OTAL (Max 100 pts)			quality or in small amounts of high	est quality	
1 or 2	Gray Zone Ca	tegory		3	Present in moderate or greater an	nounts	

and of highest quality

W-WRL-008-ORAM.xlsx | Quantitative Form

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		0	
	Metric 2. Buffers and surrounding land use		8	
	Metric 3. Hydrology	1	2	
	Metric 4. Habitat		8	
	Metric 5. Special Wetland Communities	(0	
	Metric 6. Plant communities, interspersion, microtopography	(6	
	TOTAL SCORE	34		Category based on score breakpoints 1 or 2 Gray Zone

Complete Wetland Categorization Worksheet.

Wetland ID:	W-WRL-008
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	*NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	*YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
		Final Category	
	oose one Category	1 *Category 2	Category 3



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-008

Date:

September 2, 2022

Description:

PEM

Category 2

Facing North



Wetland W-WRL-008

Date:

September 2, 2022

Description:

PEM

Category 2

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-008

Date:

September 2, 2022

Description:

PEM

Category 2

Facing South



Wetland W-WRL-008

Date:

September 2, 2022

Description:

PEM

Category 2

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-008

Date:

September 2, 2022

Description:

PEM

Category 2

Soil Pit



U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/2/22	
Applicant/Owner: AEP		<u> </u>	State: OH	Sampling Point:	W-WRL-008-UPL	
Investigator(s): WRL, CRW Section, Township, Range: S10 T12N R17W						
Landform (hillside, terrace, etc.): Hillslope	Lo	ocal relief (concave, convex,		Slope (%):	15	
Subregion (LRR or MLRA): LRR N	Lat: 39.37559		82.44439		WGS84	
Soil Map Unit Name: WhL1D1: Wharton-La			NWI classifica			
Are climatic / hydrologic conditions on the si		·			- 1	
, ,	,,			explain in Remarks		
Are Vegetation, Soil, or Hydr			ircumstances" present		NO	
Are Vegetation, Soil, or Hydr	ologynaturally prob	lematic? (If needed, exp	olain any answers in R	emarks.)		
SUMMARY OF FINDINGS – Attac	n site map showing	sampling point locati	ons, transects, in	nportant featu	res, etc.	
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area				
Hydric Soil Present?	Yes No X	within a Wetland?	Yes	No X		
Wetland Hydrology Present?	Yes No X					
Upland point associated with wetland W-W than average within the past 30 days.	TE 000 taken full east Of V	wedanu boundary. Lackling d	ny wetana inaleatols.	т теогрианоп паѕ в	oon nigner	
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators		<u>equired)</u>	
Primary Indicators (minimum of one is requ		(D44)	Surface Soil Crac	` '	(DO)	
Surface Water (A1)	True Aquatic Plants			ted Concave Surfa	ce (B8)	
High Water Table (A2) Saturation (A3)	Hydrogen Sulfide O	eres on Living Roots (C3)	Drainage Patterns (B10) Moss Trim Lines (B16)			
Water Marks (B1)	Presence of Reduce	=	Dry-Season Water			
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows			
Drift Deposits (B3)	Thin Muck Surface (e on Aerial Imagery	(C9)	
Algal Mat or Crust (B4)	Other (Explain in Re		Stunted or Stress		, ,	
Iron Deposits (B5)			Geomorphic Pos	ition (D2)		
Inundation Visible on Aerial Imagery (B	7)		Shallow Aquitard	(D3)		
Water-Stained Leaves (B9)			Microtopographic	Relief (D4)		
Aquatic Fauna (B13)			FAC-Neutral Tes	t (D5)		
Field Observations:						
Surface Water Present? Yes	No X Depth (inch					
Water Table Present? Yes	No X Depth (inch	· ———				
Saturation Present? Yes	No X Depth (inch	nes): wetland i	Hydrology Present?	Yes	No X	
(includes capillary fringe) Describe Recorded Data (stream gauge, m	onitoring well, aerial photo	s previous inspections) if a	vailable:			
		-, p				
Remarks:						
No wetland hydrology indicators present.						

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2				That Are OBL, FACW, or FAC: (A)		
3 4.				Total Number of Dominant Species Across All Strata: 5 (B)		
4 5.				``		
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)		
o. 7.				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: Multiply by:		
50% of total cover:		of total cover:		OBL species 0 x 1 = 0		
Sapling/Shrub Stratum (Plot size: 15' r		or total cover.		FACW species 50 x 2 = 100		
1. Rubus occidentalis	10	Yes	UPL	FAC species 35 x 3 = 105		
Magnolia acuminata	3	Yes	FACU	FACU species 19 x 4 = 76		
3. Liriodendron tulipifera	1	No	FACU	UPL species 10 x 5 = 50		
4.				Column Totals: 114 (A) 331 (B)		
5.				Prevalence Index = B/A = 2.90		
6.				Hydrophytic Vegetation Indicators:		
7.				1 - Rapid Test for Hydrophytic Vegetation		
 8.				2 - Dominance Test is >50%		
9.				3 - Prevalence Index is ≤3.0 ¹		
	14	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting		
50% of total cover:	7 20%	of total cover:	3	data in Remarks or on a separate sheet)		
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)		
Dichanthelium clandestinum	25	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must		
2. Thelypteris palustris	25	Yes	FACW	be present, unless disturbed or problematic.		
3. Onoclea sensibilis	10	No	FACW	Definitions of Four Vegetation Strata:		
4. Lespedeza cuneata	15	Yes	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or		
5. Desmodium canadense	10	No	FAC	more in diameter at breast height (DBH), regardless of		
6. Panicum dichotomiflorum	10	No	FACW	height.		
7. Agrimonia parviflora	5	No	FACW	Sapling/Shrub – Woody plants, excluding vines, less		
8.				than 3 in. DBH and greater than or equal to 3.28 ft		
9.				(1 m) tall.		
10.				Herb – All herbaceous (non-woody) plants, regardless		
11.				of size, and woody plants less than 3.28 ft tall.		
	100	=Total Cover		Woody Vine - All woody vines greater than 3.28 ft in		
50% of total cover:	20%	of total cover:	20	height.		
Woody Vine Stratum (Plot size:30' r)						
1						
2						
3						
4						
5				Hydrophytic		
	:	=Total Cover		Vegetation		
50% of total cover:	20%	of total cover:		Present? Yes No X		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)					
No hydrophytic vegetaion indicator present.	,					

Sampling Point: W-WRL-008-UPL

SOIL Sampling Point: w-wrl-008-UPL

	ription: (Describe t	to the dept				ator or co	onfirm the abs	ence of indic	ators.)	
Depth	Matrix			K Featu	- 1	1 2	- .			
(inches)	Color (moist)		Color (moist)	%	Type'	Loc ²	Texture		Rem	arks
0-8	10YR 4/4	100		-			Loamy/Claye			
8-17	7.5YR 5/3	100					Loamy/Claye	<u></u>		
¹ Type: C=Co	oncentration, D=Depl	etion. RM=	Reduced Matrix. N	 IS=Mas	ked San	d Grains.	²Lo	cation: PL=P	ore Linina. M	=Matrix.
Hydric Soil I			,							tic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be	low Su	rface (S8	(MLRA	147, 148)	2 cm Mu	ck (A10) (ML	.RA 147)
	ipedon (A2)		Thin Dark Su						airie Redox (
Black His	stic (A3)		Loamy Muck	y Miner	al (F1) (N	ILRA 13	6)	(MLRA	A 147, 148)	
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)			Piedmor	t Floodplain	Soils (F19)
Stratified	Layers (A5)		Depleted Ma	trix (F3))			(MLRA	A 136, 147)	
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface	(F6)			Red Par	ent Material (F21)
Depleted	Below Dark Surface	(A11)	Depleted Da	rk Surfa	ice (F7)			(outsi	de MLRA 12	7, 147, 148)
	rk Surface (A12)		Redox Depre		, ,				allow Dark Su	
	ucky Mineral (S1)		Iron-Mangan		sses (F1	2) (LRR 1	٧,	Other (E	xplain in Ren	narks)
	leyed Matrix (S4)		MLRA 136					2		
	edox (S5)		Umbric Surfa							vegetation and
	Matrix (S6)		Piedmont Flo							ust be present,
	face (S7)		Red Parent I	Material	(F21) (M	LRA 127	', 147, 148)	unless d	isturbed or pr	roblematic.
	ayer (if observed):									
Type:										
Depth (in	iches):		ı				Hydric Soil	Present?	Yes	NoX
Remarks:										
No hydric soi	I indicators present.									

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project		City/County: Vinton		_Sampling Date:	9/2/22
Applicant/Owner: AEP			State: OH	_Sampling Point:	W-WRL-009
Investigator(s): WRL, CRW		Section, Township, Range:	S2 T12N R17W		
Landform (hillside, terrace, etc.): Hillslope	L	- ocal relief (concave, convex,		Slope (%):	10
Subregion (LRR or MLRA): LRR N	Lat: 39.37607		82.43777	Datum:	WGS84
Soil Map Unit Name: Omu1C1: Omulga silt			NWI classifica		
Are climatic / hydrologic conditions on the si			No X (If no, e		e)
, ,	,,		ircumstances" present		
Are Vegetation, Soil, or Hydr	' <u></u>		•		. NO
Are Vegetation, Soil, or Hydr			olain any answers in Re		
SUMMARY OF FINDINGS – Attacl	n site map showing	sampling point location	ons, transects, im	iportant featu	res, etc.
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area			
Hydric Soil Present?	Yes X No	within a Wetland?	Yes X	No	
Wetland Hydrology Present?	Yes X No				
Remarks: PUB wetland- large pond within ROW. The the past 90 days. Wetland hydrology indica				higher than averaç	je within
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two	required)
Primary Indicators (minimum of one is requ			Surface Soil Crac	· ,	
X Surface Water (A1)	True Aquatic Plants		Sparsely Vegetate		ce (B8)
X High Water Table (A2)	Hydrogen Sulfide O		Drainage Patterns		
X Saturation (A3)		eres on Living Roots (C3)	Moss Trim Lines (
Water Marks (B1)	Presence of Reduct	ed fron (C4) ion in Tilled Soils (C6)	Dry-Season Water		
Sediment Deposits (B2) Drift Deposits (B3)	Thin Muck Surface		Crayfish Burrows Saturation Visible		, (Ca)
Algal Mat or Crust (B4)	Other (Explain in Re		Stunted or Stress		, (C3)
Iron Deposits (B5)	Other (Explain in Re	cmanaj	X Geomorphic Posit		
X Inundation Visible on Aerial Imagery (B	57)		Shallow Aquitard	` '	
Water-Stained Leaves (B9)	,		Microtopographic		
Aquatic Fauna (B13)			X FAC-Neutral Test	` ,	
Field Observations:					
Surface Water Present? Yes X	No Depth (inch	hes): <u>36</u>			
Water Table Present? Yes X	No Depth (inch	hes): 0			
Saturation Present? Yes X	No Depth (incl	hes): 0 Wetland I	Hydrology Present?	Yes X	No
(includes capillary fringe)					
Describe Recorded Data (stream gauge, m	onitoring well, aerial photo	os, previous inspections), if a	vailable:		
Remarks: Multiple primary and secondary wetland hy	drology indicators present	. Surface water >36 inches d	өер.		

VEGETATION (Four Strata) – Use scientific names of plants.

Trace Observations (Distractions and Other)	Absolute	Dominant	Indicator	Davidson - Task walls back		
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:		
1				Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)		
3.						
4.				Total Number of Dominant Species Across All Strata: 5 (B)		
5.				``		
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)		
7.				Prevalence Index worksheet:		
···		Total Cover		Total % Cover of: Multiply by:		
50% of total cover:		of total cover:		OBL species 10 x 1 = 10		
Sapling/Shrub Stratum (Plot size: 15' r)		o. 101a. 0010		FACW species 15 x 2 = 30		
1.				FAC species 0 x 3 = 0		
2.				FACU species 0 x 4 = 0		
3.				UPL species 0 x 5 = 0		
4.				Column Totals: 25 (A) 40 (B)		
5.				Prevalence Index = $B/A = 1.60$		
6.				Hydrophytic Vegetation Indicators:		
7.				1 - Rapid Test for Hydrophytic Vegetation		
8.				X 2 - Dominance Test is >50%		
9.				X 3 - Prevalence Index is ≤3.0¹		
ə		Total Cover		4 - Morphological Adaptations ¹ (Provide supporting		
50% of total cover:		of total cover:		data in Remarks or on a separate sheet)		
Herb Stratum (Plot size: 5' r)		oi total cover.		Problematic Hydrophytic Vegetation ¹ (Explain)		
Leersia virginica	5	Yes	FACW			
Juncus effusus	5	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
	5	Yes	OBL	Definitions of Four Vegetation Strata:		
Lycopus americanus Persicaria amphibia	5	Yes	OBL			
· · · · · · · · · · · · · · · · · · ·	5			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of		
5. Thelypteris palustris		Yes	FACW	height.		
6.						
7				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft		
8				(1 m) tall.		
10 11.				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
· · · · · · · · · · · · · · · · · · ·	25 =	Total Cover		Woody Vine – All woody vines greater than 3.28 ft in		
50% of total cover: 1:		of total cover:	5	height.		
Woody Vine Stratum (Plot size: 30' r)	2070	or total cover.		,		
1.						
2.						
3.						
4.						
5.						
		Total Cover		Hydrophytic		
E09/ of total cover:				Vegetation Present? Yes X No		
50% of total cover:	20%	of total cover:		Present?		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)					
Hydrophytic vegetation indicators present.						

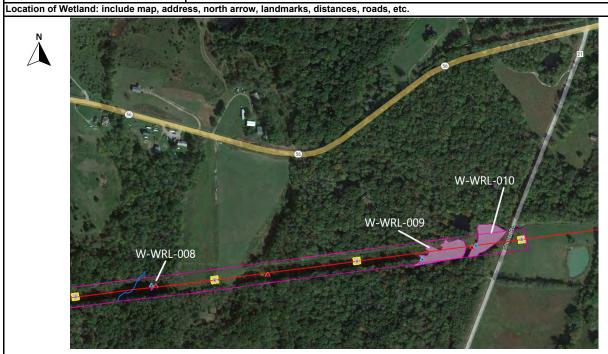
Sampling Point: W-WRL-009

SOIL Sampling Point: W-WRL-009

Profile Desci	ription: (Describe t	o the depth	needed to doc	ument t	he indica	ator or co	onfirm the abso	ence of indica	ators.)	
Depth	Matrix			x Featur	res					
(inches)	Color (moist)	% (Color (moist)	%	Type ¹	Loc ²	Texture		Remark	S
¹ Type: C=Co	ncentration, D=Deple	etion. RM=R	educed Matrix. N	MS=Mas	ked San	d Grains.	² Lo	cation: PL=Po	ore Lining, M=M	latrix.
Hydric Soil I		,	,				-		r Problematic	
Histosol (Polyvalue Be	elow Sui	rface (S8	(MLRA	147, 148)		ck (A10) (MLR	-
	pedon (A2)	_	Thin Dark S						airie Redox (A1	-
Black His		_	Loamy Muck						147, 148)	- ,
	n Sulfide (A4)	_	Loamy Gley				,		t Floodplain Soi	ls (F19)
	Layers (A5)	_	Depleted Ma						136, 147)	(
	ck (A10) (LRR N)	_	Redox Dark						ent Material (F2	1)
	Below Dark Surface	(A11)	Depleted Da					(outsid	le MLRA 127, 1	47, 148)
Thick Da	rk Surface (A12)	` ′ _	Redox Depr		, ,				llow Dark Surfa	
Sandy Mu	ucky Mineral (S1)	_	Iron-Mangar	nese Ma	sses (F1	2) (LRR N	١,	Other (Ex	oplain in Remar	ks)
Sandy GI	eyed Matrix (S4)		MLRA 130	6)						
Sandy Re	edox (S5)		Umbric Surfa	ace (F13	B) (MLRA	122, 136	6)	³ Indicators of	hydrophytic ve	getation and
Stripped	Matrix (S6)	_	Piedmont Fl	oodplain	Soils (F	19) (MLR	A 148)	wetland h	nydrology must	be present,
Dark Surf	face (S7)		Red Parent	Material	(F21) (M	LRA 127	, 147, 148)	unless di	sturbed or prob	lematic.
Restrictive L	ayer (if observed):									
Type:										
Depth (in	ches):						Hydric Soil	Present?	Yes X	No
Remarks:							•			
	y definition 3.B									

Background Information				
Name:	B. Leopold and C.Wyse			
Date:	9/2/2022			
Affiliation:	AECOM			
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202			
Phone Number:	859-640-5603			
e-mail address:	Bill.Leopold@aecom.com			
Name of Wetland:	W-WRL-009			
Vegetation Communit(ies):	РИВ			
HGM Class(es):	DEPRESSION			





Lat/Long or UTM Coordinate:	39.37607, -82.43777
USGS Quad Name:	New Plymouth
County:	Vinton
Township:	Swan
Section and Subsection:	S3 T12N R17W
Hydrologic Unit Code:	Brushy Fork (HUC: 050901010203)
Site Visit:	9/2/2022
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-WRL-009		
Wetland Size (delineated acres):	0.81	Wetland Size (Estimated total acres):	0.81
Sketch: Include north arrow, relationshi	p with other surface waters, vegetation	on zones, etc.	
N A			
	W-WRL-009	W-WRL-010	
Comments, Narrative Discussion, Justif PUB wetland- large pond within	ication of Category Changes: ROW. The wetland extends to	the south, outside the study	area. Precipitation has been
higher than average within the phydric soil indicator present.			
Final score:	55	Category:	2
	55	9) '	4

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

0.1	Blating forested without leads to the without a forested without with FOO/ or seem of the	lu-a	
db	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast	YES	*NO
	height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status. Go to Question 9a	Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less	YES	*NO
	than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9h	Does the wetland's hydrology result from measures designed to prevent erosion and the	YES	*NO
35	loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 9c
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	*NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant	YES	NO
30	species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton,	YES	*NO
	Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or	YES	*NO
	all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

ite: AEP I	lesboro 138 kV Project	Rater(s):	B. Leopold and C.	Wyse	Date:	9/2/2022
				Field ID:		
2.0	2.0 Metric 1. We	tland Area (size	٥١	W-WRL-009		
		•	-).	W-WKE-003		
ax 6 pts subtotal	>50 acres (>20.2ha)	ss and assign score.				
	25 to <50 acres (10.	1 to <20.2ha) (5 pts)		Delineated acres:	0.81	
	10 to <25 acres (4 to 3 to <10 acres (1.2 to					
	x 0.3 to <3 acres (0.12	2 to <1.2ha) (2pts)		Total acres:	0.81	
	<0.1 acres (0.04ha)	04 to <0.12ha) (1 pt) (0 pts)				
40.0						
		and buffers an	•	•	_	
ax 14 pts. subtotal		i ge buffer width. Selec age 50m (164ft) or more		n score. Do not double che	eck.	
	MEDIUM. Buffers av	verage 25m to <50m (82	2 to <164ft) around we	tland perimeter (4)		
		average 10m to <25m (3 uffers average <10m (<				
		rounding land use. Se				
	x VERY LOW. 2nd gre					
		years), shrubland, your				
		iH. Residential, fenced p trial, open pasture, row		ation tillage, new fallow field.	. (3)	
	Tilori. Olban, indus	iliai, open pasture, row	cropping, mining, cons	struction. (1)		
21.0	36.0 Metric 3. Hyd	drology.				
ax 30 pts. subtotal	3a. Sources of Wat	er. Score all that appl	٧.	3b. Connectivity. Score	all that apply.	
	High pH groundwate	er (5)	´ □	100 year floodplain (1)		
	Other groundwater (x Precipitation (1)	(3)	<u> </u>	Between stream/lake and x Part of wetland/upland (e		
	x Precipitation (1) Seasonal/Intermitter	nt surface water (3)		Part of riparian or upland		
		ater (lake or stream) (5)			/saturation. Score one or d	bl check.
	x >0.7 (27.6in) (3)	r depth. Select one.	-	 Semi- to permanently inu Regularly inundated/satu 		
	0.4 to 0.7m (15.7 to	27.6in) (2)		Seasonally inundated (2)	1	
	<0.4m (<15.7in) (1)	o natural hydrologic r	ogime Score one or	Seasonally saturated in u double check and average.		
	None or none appar		gille. Ocore one or	Check all disturbances		
	x Recovered (7)			ditch	point source (nonsto	ormwater)
	Recovering (3) Recent or no recove	ery (1)	—	tile x dike	filling/grading road bed/RR track	
	<u> </u>			weir	x dredging	
			L	stormwater input	Other:	
12.0	48.0 Metric 4. Hal	oitat Alteration	and Developn	nent.		
nax 20 pts. subtotal		rbance. Score one or	double check and av	erage.		
	None or none appar x Recovered (3)	ent (4)				
	Recovering (2)					
	Recent or no recove	ery (1) oment. Select only one	and assign ecore			
	Excellent (7)	ment. Select only one	anu assiyii score.			
	Very good (6)					
	Good (5) Moderately good (4)	1				
	x Fair (3)					
	Poor to fair (2) Poor (1)					
	4c. Habitat alteration	on. Score one or doub	le check and average	9.		
	None or none appar	ent (9)	_	Check all disturbances of		ral
	x Recovered (6) Recovering (3)		H	mowing grazing	shrub/sapling remov x herbaceous/aquatic	
	Recent or no recove	ery (1)		clearcutting	sedimentation	
			F	selective cutting woody debris removal	x dredging farming	
				toxic pollutants	nutrient enrichment	
<u>.</u>			_			
	48.0					
subtotal th	is page ORAM v. 5.0 Field F	orm Quantitative Rating	9			

W-WRL-009-ORAM.xlsx | Quantitative Form 9/27/2022

Wetla	ınd ID:	W-WRL-009					
Site:	AEP Ilesbo	oro 138 kV Project	Rater(s):	В.	Leopold and C.Wyse	Date:	9/2/2022
O.CO.			. (3).		Loopoid and citty oc	20.0.	0,2,2022
					Field ID:		
	48.0				W-WRL-009		
	subtotal this page						
(0.0 48.0	Metric 5. Special We	tlands.				
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 wetlar Lake Erie coastal/tributary wetlar		10)			
		Lake Plain Sand Prairies (Oak O					
		Relict Wet Praires (10)			(40)		
		Known occurrence state/federal t Significant migratory songbird/wa			(10)		
		Category 1 Wetland. See Question					
	- 0 - 55 0	Mark to 0. Discrete and					
	7.0 55.0	Metric 6. Plant comm	•	rsior			
max 20pts.	subtotal	6a. Wetland Vegetation C		0	Vegetation Community (Absent or comprises <0.1ha (0.24		
		Score all present using 0 to 3 sca 0 Aquatic bed	aie.	1	Present and either comprises small		
		0 Emergent			vegetation and is of moderate qua	ality, or comprises a	
		Shrub Forest		- 2	significant part but is of low qualit Present and either comprises sign		
		Mudflats		2	vegetation and is of moderate qua		
		2 Open water			part and is of high quality		
	L	OtherOther	spersion.	3	Present and comprises significan vegetation and is of high quality	t part, or more, or wetland's 3	
	_	Select only one.					
	_	High (5) Moderately high(4)			Narrative Description of Vegeta Low spp diversity and/or predomi		
		Moderate (3)			disturbance tolerant native specie		
		Moderately low (2)			Native spp are dominant compon		
	_	x Low (1) None (0)			although nonnative and/or disturb can also be present, and species		
	_	6c. Coverage of invasive plant			moderately high, but generallyw/o		
		Table 1 ORAM long form for list. or deduct points for coverage	Add		threatened or endangered spp to A predominance of native species	with nonnative can high	
		Extensive >75% cover (-5)			and/or disturbance tolerant native		
		Moderate 25-75% cover (-3)			absent, and high spp diversity and		
	_	Sparse 5-25% cover (-1) Nearly absent <5% cover (0)			the presence of rare, threatened,	or endangered spp	
		x Absent (1)			Mudflat and Open Water Class	Quality	
		6d. Microtopography. Score all present using 0 to 3 sca	ala		Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 ac	2700	
	Γ	Vegetated hummucks/tussucks	ale.		Moderate 1 to <4ha (2.47 to 9.88		
		1 Coarse woody debris >15cm (6ir			High 4ha (9.88 acres) or more	<u> </u>	
	-	Standing dead >25cm (10in) dbhAmphibian breeding pools	1		Microtopography Cover Scale		
	L			0	Absent		
				1	Present very small amounts or if	more common	
				2	of marginal quality Present in moderate amounts, bu	t not of highest	
	55.0	TOTAL (Max 100 pts)		_	quality or in small amounts of high	•	
		Category		3	Present in moderate or greater ar		_
				3	and of highest quality	·· · · · · ·	
					and or mynest quality		

W-WRL-009-ORAM.xlsx | Quantitative Form 9/27/2022

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	2	
	Metric 2. Buffers and surrounding land use	1	.3	
	Metric 3. Hydrology	2	21	
	Metric 4. Habitat	1	2	
	Metric 5. Special Wetland Communities	(0	
	Metric 6. Plant communities, interspersion, microtopography	,	7	
	TOTAL SCORE	5	55	Category based on score breakpoints 2

 $Complete\ Wetland\ Categorization\ Worksheet.$

Wetland ID:	W-WRL-009
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM			
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	owing questions: Wetland is categorized rrative Rating Nos. 2, 3, as a Category 3		Is quantitative rating score less than the Category 2 scoring thres (excluding gray zone)? If yes, reevaluate the category of the wetl using the narrative criteria in OAC Rule 3745-1-54(C) and biologic and/or functional assessments to determine if the wetland has been over- categorized by the ORAM			
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.			
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM			
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	*YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.			
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria		Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).			
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.			
		Final Categor	y			



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-009

Date:

September 2, 2022

Description:

PUB

Category 2

Facing North



Wetland W-WRL-009

Date:

September 2, 2022

Description:

PUB

Category 2

Facing East





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-009

Date:

September 2, 2022

Description:

PUB

Category 2

Facing South



Wetland W-WRL-009

Date:

September 2, 2022

Description:

PUB

Category 2

Facing West





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-009

Date:

September 2, 2022

Description:

PUB

Category 2

Soils



U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project		City/County: Vinton		_Sampling Date:	9/2/22
Applicant/Owner: AEP			State: OH	Sampling Point:	W-WRL-009/010-UPL
Investigator(s): WRL, CRW		Section, Township, Range:	S2 T12N R17W	_	
Landform (hillside, terrace, etc.): Hillslope	Lo	ocal relief (concave, convex,		Slope (%):	5
Subregion (LRR or MLRA): LRR N	Lat: 39.37630		32.43651	Datum:	WGS84
Soil Map Unit Name: Omu1C1: Omulga silt I			NWI classificat		WCC04
Are climatic / hydrologic conditions on the site	e typical for this time of ye	ear? Yes	No X (If no, e	explain in Remark	s.)
Are Vegetation , Soil , or Hydro	logy significantly di	isturbed? Are "Normal C	ircumstances" present?		
Are Vegetation, Soil, or Hydro			plain any answers in Re		
SUMMARY OF FINDINGS – Attach			-		res, etc.
The decode of a Variate fier Barrard	V N- V	le the Country of Amer			
, , , ,	Yes No X	Is the Sampled Area	Vaa	No. V	
	Yes No X	within a Wetland?	Yes	No <u>X</u>	
Wetland Hydrology Present? Remarks:	Yes No_X_				
Upland point associated with wetlands W-W indicators. Precipitation has been higher that			o ponds within the ROV	V. Lacking wetland	3
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two I	required)
Primary Indicators (minimum of one is require	ed; check all that apply)		Surface Soil Crac	, ,	
Surface Water (A1)	True Aquatic Plants		Sparsely Vegetate		ce (B8)
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Patterns		
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines (
Water Marks (B1)	Presence of Reduce		Dry-Season Wate		
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows		, (CO)
Drift Deposits (B3)	Thin Muck Surface (Saturation Visible		/ (C9)
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Re	illaiks)	Stunted or Stressor Geomorphic Posit		
Inundation Visible on Aerial Imagery (B7	7)		Shallow Aquitard	, ,	
Water-Stained Leaves (B9)	,		Microtopographic		
Aquatic Fauna (B13)			FAC-Neutral Test		
Field Observations:				,	
Surface Water Present? Yes	No X Depth (inch	nes):			
Water Table Present? Yes	No X Depth (inch				
Saturation Present? Yes	No X Depth (inch		Hydrology Present?	Yes	No X
(includes capillary fringe)					
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photo	s, previous inspections), if av	/ailable:		
Remarks:					
No wetland hydrology indicator present.					

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:
1.				Number of Dominant Species
2.				That Are OBL, FACW, or FAC:1 (A)
3.				Total Number of Dominant
4				Species Across All Strata: 4 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 25.0% (A/B) Prevalence Index worksheet:
7	· 	=Total Cover		
50% of total cover:		of total cover:		
Sapling/Shrub Stratum (Plot size: 15' r	20%	or total cover.		OBL species 0 x 1 = 0 FACW species 15 x 2 = 30
	,'	Vos	FAC	FAC species 2 x 3 = 6
1. Acer rubrum	2 2	Yes		
2. Liriodendron tulipifera		Yes	FACU	FACU species 98 x 4 = 392
3. Rosa multiflora	1	Yes	FACU	UPL species 5 x 5 = 25
4				Column Totals: 120 (A) 453 (B)
5.				Prevalence Index = B/A = 3.78
6.				Hydrophytic Vegetation Indicators:
7	·			1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9.				3 - Prevalence Index is ≤3.0 ¹
		=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	3 20%	of total cover:	1	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Andropogon virginicus	60	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
2. Cyperus strigosus	10	No	FACW	be present, unless disturbed or problematic.
3. Symphyotrichum ericoides	15	No	FACU	Definitions of Four Vegetation Strata:
4. Juncus effusus	5	No	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Tridens flavus	10	No	FACU	more in diameter at breast height (DBH), regardless of
6. Solidago canadensis	5	No	FACU	height.
7. Apocynum cannabinum	5	No	FACU	Sapling/Shrub – Woody plants, excluding vines, less
8. Lespedeza bicolor	5	No	UPL	than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb - All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
	115	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover:	58 20%	of total cover:	23	height.
Woody Vine Stratum (Plot size: 30' r)				
1.				
2.				
3.				
4.				
5.				
	·	=Total Cover		Hydrophytic Vegetation
50% of total cover:		of total cover:		Present? Yes No X
				1
Remarks: (Include photo numbers here or on a sep	parate sheet.)			
No hydrophytic vegetation indicator present.				

Sampling Point: w-wrl-009/010-UPL

SOIL Sampling Point: w-wrl-009/010-UPL

Profile Desc	ription: (Describe t	to the dep	th needed to doc	ument t	he indica	ator or c	onfirm the absence o	of indicators.)	
Depth	Matrix			x Featur	-				
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Ren	narks
0-1	7.5YR 2.5/3	100					Loamy/Clayey		
1-11	10YR 5/3	70	10YR 3/6	20	<u>C</u>	M	Loamy/Clayey	Distinct redox	concentrations
			10YR 6/2	10	<u>D</u>	M			
11-16	10YR 4/2	70	10YR 5/6	30	С	М	Loamy/Clayey	Prominent redo	x concentrations
¹ Type: C=Co	oncentration, D=Depl	etion, RM:	=Reduced Matrix, N	—— ИS=Mas	ked San	d Grains.	² Location	: PL=Pore Lining, N	/I=Matrix.
Hydric Soil		,	,					ators for Problema	
Histosol	(A1)		Polyvalue Be	elow Sur	rface (S8) (MLRA	147, 148) 2	cm Muck (A10) (M	LRA 147)
Histic Ep	ipedon (A2)		Thin Dark Su	urface (S	89) (MLR	A 147, 1	48) C	Coast Prairie Redox	(A16)
Black His	` '		Loamy Muck	-		ILRA 13		(MLRA 147, 148)	
	n Sulfide (A4)		Loamy Gleye				P	Piedmont Floodplain	Soils (F19)
	Layers (A5)		Depleted Ma	` '			-	(MLRA 136, 147)	(F04)
	ck (A10) (LRR N) I Below Dark Surface	. (Δ11)	Redox Dark Depleted Da		` '		<u> </u>	Red Parent Material (outside MLRA 12	` '
	rk Surface (A12)	; (A11)	Redox Depre		, ,		V	ery Shallow Dark S	
	lucky Mineral (S1)		Iron-Mangar			2) (LRR I		Other (Explain in Re	
	leyed Matrix (S4)		MLRA 136		`	, ,	<u> </u>		,
Sandy R	edox (S5)		Umbric Surfa	ace (F13	3) (MLRA	122, 13	6) 3Indic	ators of hydrophytic	vegetation and
	Matrix (S6)		Piedmont Flo	oodplain	Soils (F	19) (MLF	RA 148) w	etland hydrology m	ust be present,
Dark Sur	face (S7)		Red Parent l	Material	(F21) (M	LRA 127	7, 147, 148) u	nless disturbed or p	roblematic.
Restrictive I	_ayer (if observed):								
Type:									
Depth (ir	nches):						Hydric Soil Prese	nt? Yes	No <u>X</u>
Remarks:	il indicators present.								
NO HYUNG SO	i indicators present.								

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project		City/County: Vinton		Sampling Date:	9/2/22
Applicant/Owner: AEP			State: OH	Sampling Point:	W-WRL-010
Investigator(s): WRL, CRW		Section, Township, Range:	S2 T12N R17W	•	
Landform (hillside, terrace, etc.): Hillslope	Lo	ocal relief (concave, convex,		Slope (%):	3
Subregion (LRR or MLRA): LRR N	Lat: 39.37633		82.43641		WGS84
Soil Map Unit Name: Omu1C1: Omulga silt			NWI classificati		
Are climatic / hydrologic conditions on the sit			No X (If no, e		c)
, ,	,,		ircumstances" present?		
Are Vegetation, Soil, or Hydro			•		110
Are Vegetation, Soil, or Hydro			olain any answers in Re		
SUMMARY OF FINDINGS – Attach	ı site map showing	sampling point location	ons, transects, im	portant featu	res, etc.
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area			
Hydric Soil Present?	Yes X No	within a Wetland?	Yes_X_	No	
Wetland Hydrology Present?	Yes X No				
PUB wetland- large excavated pond within days. Wetland hydrology indicators, hydrop				average within the	e past 30
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two	equired)
Primary Indicators (minimum of one is requ	ired; check all that apply)		Surface Soil Crack	<s (b6)<="" td=""><td></td></s>	
X Surface Water (A1)	True Aquatic Plants	s (B14)	Sparsely Vegetate	d Concave Surfa	ce (B8)
X High Water Table (A2)	Hydrogen Sulfide O		Drainage Patterns		
X Saturation (A3)		eres on Living Roots (C3)	Moss Trim Lines (
Water Marks (B1)	Presence of Reduce		Dry-Season Water		
Sediment Deposits (B2)		ion in Tilled Soils (C6)	Crayfish Burrows		(00)
Drift Deposits (B3)	Thin Muck Surface		Saturation Visible		/ (C9)
Algal Mat or Crust (B4)	Other (Explain in Re	emarks)	Stunted or Stresse		
Iron Deposits (B5) X Inundation Visible on Aerial Imagery (B	7\		X Geomorphic Positi Shallow Aquitard (. ,	
Water-Stained Leaves (B9)	7)		Microtopographic		
Aquatic Fauna (B13)			X FAC-Neutral Test		
Field Observations:			7 The Neutral Feet	(20)	
Surface Water Present? Yes X	No Depth (inch	nes): 36			
Water Table Present? Yes X	No Depth (inch	nes): 0			
Saturation Present? Yes X	No Depth (incl	nes): 0 Wetland I	Hydrology Present?	Yes X	No
(includes capillary fringe)		·			
Describe Recorded Data (stream gauge, m	onitoring well, aerial photo	os, previous inspections), if a	vailable:		
Remarks:					
Multiple primary and one secondary wetland	d hydrology indicator pres	ent. Surface water >36 inche	s deep.		
	, ,		•		

VEGETATION (Four Strata) – Use scientific names of plants.

- O	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30' r)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC: (A)
3				Total Number of Dominant
4.				Species Across All Strata: 2 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100.0% (A/B)
7		T / 10		Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
50% of total cover:	20%	of total cover:		OBL species 25 x 1 = 25
Sapling/Shrub Stratum (Plot size: 15' r)				FACW species 7 x 2 = 14
1. Acer rubrum	1	No	FAC	FAC species 1 x 3 = 3
2				FACU species 0 x 4 = 0
3				UPL species 0 x 5 = 0
4				Column Totals: 33 (A) 42 (B)
5				Prevalence Index = B/A = 1.27
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				X 2 - Dominance Test is >50%
9				X 3 - Prevalence Index is ≤3.0 ¹
	1	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:1	20%	of total cover:	1	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)
Leersia oryzoides	10	Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must
2. Sparganium americanum	10	Yes	OBL	be present, unless disturbed or problematic.
3. Juncus effusus	5	No	FACW	Definitions of Four Vegetation Strata:
4. Typha latifolia	5	No	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Eupatorium perfoliatum	2	No	FACW	more in diameter at breast height (DBH), regardless of
6.				height.
7				Sapling/Shrub - Woody plants, excluding vines, less
8				than 3 in. DBH and greater than or equal to 3.28 ft
9				(1 m) tall.
10				Herb - All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
	32 :	=Total Cover		Woody Vine - All woody vines greater than 3.28 ft in
50% of total cover:1	6 20%	of total cover:	7	height.
Woody Vine Stratum (Plot size:30' r)				
1				
2				
3				
4				
5				Hydrophytic
	:	=Total Cover		Vegetation
50% of total cover:	20%	of total cover:		Present? Yes X No No
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			•
Hydrophytic vegetation indicators present.	,			

Sampling Point: W-WRL-010

SOIL Sampling Point: W-WRL-010

Profile Desc	ription: (Describe to	the depth ne	eded to docu	ıment th	ne indica	tor or co	onfirm the abso	ence of indicate	ors.)	
Depth	Matrix	<u> </u>	Redox	k Feature	es					
(inches)	Color (moist)	% Co	lor (moist)	%	Type ¹	Loc ²	Texture		Remark	s
								 -		
	ncentration, D=Deple	tion, RM=Red	uced Matrix, N	/IS=Masl	ked Sand	d Grains.	² Lo	cation: PL=Pore		•
Hydric Soil I								Indicators for		-
Histosol (Polyvalue Be						(A10) (MLRA	-
	pedon (A2)		Thin Dark Su	,	, ,		•		rie Redox (A1	6)
Black His			Loamy Muck			ILRA 130	6)	(MLRA 1		. (=)
	Sulfide (A4)		Loamy Gleye		(F2)				Floodplain Soi	Is (F19)
	Layers (A5)		Depleted Ma Redox Dark		(Ec)			(MLRA 1		4)
	ck (A10) (LRR N) Below Dark Surface	<u> </u>	Depleted Da		` '				t Material (F2 MLRA 127, 1	,
	rk Surface (A12)	(A11)	Redox Depre		` '				ow Dark Surfa	-
	ucky Mineral (S1)		Iron-Mangan			2) (LRR N	٧.		lain in Remar	` ,
	eyed Matrix (S4)		MLRA 136		(, ,	•			-,
	edox (S5)		Umbric Surfa	ce (F13)	(MLRA	122, 136	6)	³ Indicators of h	ydrophytic ve	getation and
Stripped	Matrix (S6)		Piedmont Flo	odplain	Soils (F	19) (MLR	A 148)	wetland hy	drology must	be present,
Dark Sur	face (S7)		Red Parent M	Material ((F21) (M	LRA 127	, 147, 148)	unless dist	urbed or prob	lematic.
Restrictive L	ayer (if observed):									
Type:										
Depth (in	ches):		_				Hydric Soil	Present?	Yes X	No
Remarks:										
Hydric soils b	y definition 3.B									

Background Information				
Name:	B. Leopold and C.Wyse			
Date:	9/2/2022			
Affiliation:	AECOM			
Address:	525 Vine St., Ste. 1800, Cincinnati, OH 45202			
Phone Number:	859-640-5603			
e-mail address:	Bill.Leopold@aecom.com			
Name of Wetland:	W-WRL-010			
Vegetation Communit(ies):	PUB			
HGM Class(es):	DEPRESSION			

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.

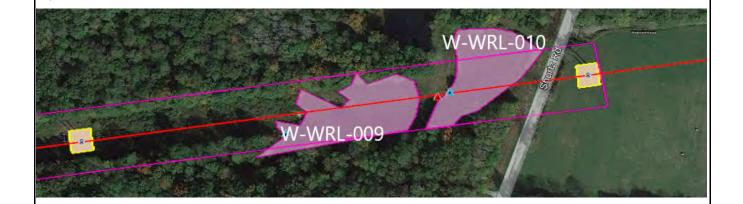




Lat/Long or UTM Coordinate:	39.37633, -82.43641			
USGS Quad Name:	New Plymouth			
County:	Vinton			
Township:	Swan			
Section and Subsection:	S3 T12N R17W			
Hydrologic Unit Code:	Brushy Fork (HUC: 050901010203)			
Site Visit:	9/2/2022			
National Wetland Inventory Map:	See Figure 2			
Ohio Wetland Inventory Map:	N/A			
Soil Survey:	See Figure 2			
Delineation report/map:	See Figure 3			

Name of Wetland:	W-WRL-010		
Wetland Size (delineated acres):	0.71	Wetland Size (Estimated total acres):	0.71
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.			

N 🔺



Comments, Narrative Discussion, Justification of Category Changes:

PUB wetland- large excavated pond within ROW, downslope of wetland W-WRL-009. Precipitation has been higher than average within the past 30 days. Wetland hydrology indicators, hydrophytic vegetation indicator, and hydric soil indicator present.

Final score: 54 Category: 2

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetlandbeing rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	Х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	х	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a	YES	*NO
	United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of,	YES	*NO
	or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage	YES	*NO
	Database as a high quality wetland?	Wetland is a Category 3 wetland Go to Question 4	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented	YES	*NO
	regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland Go to Question 5	Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and	YES	*NO
	hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 1 wetland Go to Question 6	Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or	YES	*NO
	outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland Go to Question 7	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during	YES	*NO
	most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized	YES	*NO
	by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an allaged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b

		T	
86	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the	YES	*NO
	cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status. Go to Question 9a	Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake	YES Go to Question 9b	*NO Go to Question 10
	Erie that is accessible to fish?	GO to Question au	GO to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the	YES	*NO
	loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 9c
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	*NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation	YES	NO
	communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland Go to Question 10	Go to Question 9e
9е	Does the wetland have a predominance of non-native or disturbance tolerant native plant	YES	NO
	species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton,	YES	*NO
	Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or	YES	*NO
	all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	Complete Quantitative Rating
		l	l

invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Vetland ID: W-WRL-010		
e: AEP llesboro 138 kV Project Rater(s): B. Leopold	and C.Wyse	Date: 9/2/2022
,()	•	
	Field ID:	
1.0 1.0 Metric 1. Wetland Area (size).	W-WRL-010	
ots 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)	Delineated acres:	0.71
3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts)	Total acres:	0.71
x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)		
<0.1 acres (0.04ha) (0 pts)		
6.0 7.0 Metric 2. Upland buffers and surrou	ınding land use.	
4 pis. subtotal 2a. Calculate average buffer width. Select only one a	•	
WIDE. Buffers average 50m (164ft) or more around wetla	-	
MEDIUM. Buffers average 25m to <50m (82 to <164ft) at X NARROW. Buffers average 10m to <25m (32ft to <82ft) at X		
VERY NARROW. Buffers average <10m (<32ft) around		
2b. Intensity of surrounding land use. Select one or o		
VERY LOW. 2nd growth or older forest, prairie, savanna		
x LOW. Old field (>10 years), shrubland, young second gro MODERATELY HIGH. Residential, fenced pasture, park,		
HIGH. Urban, industrial, open pasture, row cropping, mir	ning, construction. (1)	
OO OL OO OL Matria O Hardrala are		
23.0 30.0 Metric 3. Hydrology.		
O pts. subtotal 3a. Sources of Water. Score all that apply. High pH groundwater (5)	3b. Connectivity. Score all the 100 year floodplain (1)	at apply.
x Other groundwater (3)	Between stream/lake and othe	
x Precipitation (1) Seasonal/Intermittent surface water (3)	x Part of wetland/upland (e.g. for Part of riparian or upland corric	
Perennial surface water (lake or stream) (5)	3d. Duration inundation/satu	ration. Score one or dbl check.
3c. Maximum water depth. Select one. x >0.7 (27.6in) (3)	Semi- to permanently inundate x Regularly inundated/saturated	
0.4 to 0.7m (15.7 to 27.6in) (2)	Seasonally inundated (2)	
<0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score	Seasonally saturated in upper	30cm (12in) (1)
x None or none apparent (12)	Check all disturbances obse	
Recovered (7) Recovering (3)	ditch	point source (nonstormwater) filling/grading
Recent or no recovery (1)	dike	road bed/RR track
	weir stormwater input	dredging Other:
16.0 46.0 Metric 4. Habitat Alteration and Dev	elopment.	
0 pts. subtotal 4a. Substrate disturbance. Score one or double chec x None or none apparent (4)	k and average.	
Recovered (3)		
Recovering (2) Recent or no recovery (1)		
4b. Habitat development. Select only one and assign	score.	
Excellent (7) Very good (6)		
Good (5)		
Moderately good (4) x Fair (3)		
Poor to fair (2)		
Poor (1) 4c. Habitat alteration. Score one or double check and	l average.	
x None or none apparent (9)	Check all disturbances observe	
Recovered (6) Recovering (3)	mowing grazing	shrub/sapling removal herbaceous/aquatic bed removal
Recent or no recovery (1)	clearcutting	sedimentation
	selective cutting woody debris removal	dredging farming
	toxic pollutants	nutrient enrichment
46.0		
subtotal this page ORAM v. 5.0 Field Form Quantitative Rating		

Wetla	ınd ID:	W-WRL-010					,
Site:	AEP Iles	boro 138 kV Project	Rater(s):	В. І	_eopold and C.Wyse	Date:	9/2/2022
		=			Field ID:		
	46.0	<u> </u>			W-WRL-010		
	subtotal this page						
	0.0 46.0	Motrio E Special We	tlanda				
max 10 pts.	subtotal	Check all that apply and Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetlan Lake Plain Sand Prairies (Oak O Relict Wet Praires (10) Known occurrence state/federal Significant migratory songbird/w Category 1 Wetland. See Questi	nd-unrestricted hydrology (nd-restricted hydrology (5) ppenings) (10) threatened or endangered ater fowl habitat or usage (species	(10)		
	3.0 54.0	Metric 6. Plant comn	nunities, interspe	rsion	, microtopography.		
max 20pts.	subtotal	6a. Wetland Vegetation 0	Communities.		Vegetation Community (Cover Scale	
		Score all present using 0 to 3 sc	ale.	0	Absent or comprises <0.1ha (0.24		
		Aquatic bed 0 Emergent		1	Present and either comprises sma vegetation and is of moderate qua		
		Shrub			significant part but is of low quality		
		Forest		2	Present and either comprises sign	nificant part of wetland's 2	
		Mudflats			vegetation and is of moderate qua	ality or comprises a small	
		2 Open water Other			part and is of high quality Present and comprises significant	nort or more of watland's 2	
		6b. horizontal (plan view) Inter	spersion.	3	vegetation and is of high quality	part, or more, or wettario's 3	
		Select only one. High (5)			Narrative Description of Vegeta	tion Quality	
		Moderately high(4)			Low spp diversity and/or predomin		
		Moderate (3)			disturbance tolerant native specie	s	
		Moderately low (2)			Native spp are dominant compone		
		x Low (1) None (0)			although nonnative and/or disturb can also be present, and species		
		6c. Coverage of invasive plant	s. Refer		moderately high, but generallyw/o		
		Table 1 ORAM long form for list.			threatened or endangered spp to	,	
		or deduct points for coverage			A predominance of native species		
		Extensive >75% cover (-5)			and/or disturbance tolerant native		
		Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)			absent, and high spp diversity and the presence of rare, threatened,		
		Nearly absent <5% cover (0)			the presence of fare, threatened,	or endangered app	
		x Absent (1)			Mudflat and Open Water Class	Quality	
		6d. Microtopography.		0	Absent <0.1ha (0.247 acres)		
		Score all present using 0 to 3 sci	ale.	1 2	Low 0.1 to <1ha (0.247 to 2.47 ac Moderate 1 to <4ha (2.47 to 9.88		
		Vegetated numinicks/tussucks Coarse woody debris >15cm (6ir	n)		High 4ha (9.88 acres) or more	acres)	
		1 Standing dead >25cm (10in) dbh		3	I 3 (c.cc dorco) of more		
		2 Amphibian breeding pools			Microtopography Cover Scale		
				0	Absent		
				1	Present very small amounts or if r of marginal quality	note common	
				2	Present in moderate amounts, but	t not of highest	
	54 (TOTAL (Max 100 pts)			quality or in small amounts of high	· ·	
	2	i '		_	† · · ·		
		2 Category		3	Present in moderate or greater an	HOURIS	
					and of highest quality		

W-WRL-010-ORAM.xlsx | Quantitative Form

9/26/2022

ORAM Summary Worksheet

		answ	cle /er or score	Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size		1	
	Metric 2. Buffers and surrounding land use	(6	
	Metric 3. Hydrology	2	23	
	Metric 4. Habitat	1	.6	
	Metric 5. Special Wetland Communities		0	
	Metric 6. Plant communities, interspersion, microtopography	:	8	
	TOTAL SCORE	5	4	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

Wetland ID:	W-WRL-010
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Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	*NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	*NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	*NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	*YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria		Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	*NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.
		Final Categor	<u>y</u>



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-010

Date:

September 2, 2022

Description:

PUB

Category 2

Facing North



Wetland W-WRL-010

Date:

September 2, 2022

Description:

PUB

Category 2

Facing East





PHOTOGRAPHIC RECORD WETLANDS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Wetland W-WRL-010

Date:

September 2, 2022

Description:

PUB

Category 2

Facing South



Wetland W-WRL-010

Date:

September 2, 2022

Description:

PUB

Category 2

Facing West





PHOTOGRAPHIC RECORD WETLANDS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Wetland W-WRL-010

Date:

September 2, 2022

Description:

PUB

Category 2

Soils



U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: AEP Ilesboro 138 kV Project		City/County: Vinton		Sampling Date: 9/2/22			
Applicant/Owner: AEP			State: OH	Sampling Point: UPL-WRL-00			
Investigator(s): WRL, CRW		Section, Township, Range:	S10 T12N R17W				
Landform (hillside, terrace, etc.): Shoulder	Lo	ocal relief (concave, convex,	none): Concave	Slope (%): 3			
Subregion (LRR or MLRA): LRR N	Lat: 39.37579	•	32.44162	Datum: WGS84			
Soil Map Unit Name: Bhs4D: Bethesda chan			NWI classificat				
Are climatic / hydrologic conditions on the site	typical for this time of ve	ear? Yes	No X (If no. 6	explain in Remarks.)			
Are Vegetation , Soil , or Hydrol			ircumstances" present?				
Are Vegetation, Soil, or Hydrol			olain any answers in Re				
SUMMARY OF FINDINGS – Attach			-				
				<u>. </u>			
, , , ,	Yes X No	Is the Sampled Area	Vaa	No. V			
	Yes No X Yes No X	within a Wetland?	Yes	No X			
Remarks:	TesNO_X						
Upland point taken at where prior mapped poutside the ROW, but wetland hydrology and average within the past 30 days.							
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)			
Primary Indicators (minimum of one is require	ed; check all that apply)		Surface Soil Crac				
Surface Water (A1)	True Aquatic Plants		Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide O		Drainage Patterns				
Saturation (A3)		res on Living Roots (C3)					
Water Marks (B1)	Presence of Reduce	, ,	· · · · · · · · · · · · · · · ·				
Sediment Deposits (B2)			n in Tilled Soils (C6) Crayfish Burrows (C8)				
Drift Deposits (B3)	Thin Muck Surface (on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Re	emarks)	Stunted or Stress X Geomorphic Posit				
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7	`\		Shallow Aquitard	, ,			
Water-Stained Leaves (B9))		Microtopographic	, ,			
Aquatic Fauna (B13)			FAC-Neutral Test				
Field Observations:				(20)			
	No X Depth (inch	es):					
Water Table Present? Yes	No X Depth (inch						
Saturation Present? Yes	No X Depth (inch		Hydrology Present?	Yes No _ X			
(includes capillary fringe)		, <u> </u>	, 0,				
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photo	s, previous inspections), if av	/ailable:				
Remarks:							
One secondary wetland hydrology indicator i	s present.						

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute	Dominant	Indicator			
<u>Tree Stratum</u> (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:		
1 2.				Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)		
3.				. ,		
4.				Total Number of Dominant Species Across All Strata: 6 (B)		
5.				Percent of Dominant Species		
6.				That Are OBL, FACW, or FAC: 66.7% (A/B)		
7.				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: Multiply by:		
50% of total cover:	20%	of total cover:		OBL species 0 $x 1 = 0$		
Sapling/Shrub Stratum (Plot size: 15' r)				FACW species 60 x 2 = 120		
1. Rubus occidentalis	5	Yes	UPL	FAC species 40 x 3 = 120		
2. Liriodendron tulipifera	5	Yes	FACU	FACU species 5 x 4 = 20		
3.				UPL species 5 x 5 = 25		
4.				Column Totals: 110 (A) 285 (B)		
5.				Prevalence Index = B/A = 2.59		
6.				Hydrophytic Vegetation Indicators:		
7.				1 - Rapid Test for Hydrophytic Vegetation		
8.				X 2 - Dominance Test is >50%		
9.				3 - Prevalence Index is ≤3.0 ¹		
	10	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting		
50% of total cover:	20%	of total cover:	2	data in Remarks or on a separate sheet)		
Herb Stratum (Plot size: 5' r)				Problematic Hydrophytic Vegetation ¹ (Explain)		
1. Agrostis gigantea	40	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must		
2. Juncus effusus	20	Yes	FACW	be present, unless disturbed or problematic.		
3. Dichanthelium dichotomum	20	Yes	FAC	Definitions of Four Vegetation Strata:		
4. Dichanthelium clandestinum	20	Yes	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or		
5				more in diameter at breast height (DBH), regardless of		
6				height.		
7				Sapling/Shrub – Woody plants, excluding vines, less		
8 9.				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
10.				Herb – All herbaceous (non-woody) plants, regardless		
11				of size, and woody plants less than 3.28 ft tall.		
50% of total cover: 5		=Total Cover of total cover:	20	Woody Vine – All woody vines greater than 3.28 ft in height.		
Woody Vine Stratum (Plot size: 30' r)						
1.						
2.						
3.						
4.						
5.				Hydrophytic		
		=Total Cover		Vegetation		
50% of total cover:	20%	of total cover:		Present? Yes X No		
Remarks: (Include photo numbers here or on a sepa Hydrophytic vegetation indicator present.	rate sheet.)					

Sampling Point: UPL-WRL-001

SOIL Sampling Point: UPL-WRL-001

Profile Desc	ription: (Describe t	o the dept	th needed to docu	ıment tl	he indica	ator or c	onfirm the absence	of indica	itors.)	
Depth	Matrix			K Featur	- 1	12	Taratana		D	
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture		Rem	arks
0-11	7.5YR 3/3	90	7.5YR 4/6	10	С	M	Loamy/Clayey	Dis	stinct redox	concentrations
11-16	7.5YR 4/6	100					Loamy/Clayey			
					' <u></u>					_
								1		_
			_							
1 _{Type:} C-C	oncentration, D=Depl	otion BM	- Poducod Matrix N		kod Son		² l contin	n: DI _Do	ore Lining, M	Motrix
Hydric Soil I		elion, Kivi=	Reduced Mairix, N	io=ivias	keu San	u Grairis.				tic Hydric Soils ³ :
Histosol			Polyvalue Be	low Sur	face (S8	(MLRA			k (A10) (ML	-
	ipedon (A2)		Thin Dark Su						airie Redox (-
Black His			Loamy Muck						147, 148)	(* 11 5)
	n Sulfide (A4)		Loamy Gleye	•	. , .		•		Floodplain	Soils (F19)
	Layers (A5)		Depleted Ma						136, 147)	` '
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface	(F6)			Red Pare	nt Material (F21)
Depleted	Below Dark Surface	(A11)	Depleted Da	rk Surfa	ce (F7)			(outsid	e MLRA 12	7, 147, 148)
Thick Da	rk Surface (A12)		Redox Depre	essions	(F8)			Very Sha	llow Dark Su	urface (F22)
	ucky Mineral (S1)		Iron-Mangan		sses (F12	2) (LRR	N,	Other (Ex	plain in Ren	narks)
	leyed Matrix (S4)		MLRA 136	•			2			
	edox (S5)		Umbric Surfa							vegetation and
	Matrix (S6)		Piedmont Flo							ust be present,
Dark Sur	face (S7)		Red Parent N	<i>M</i> aterial	(F21) (M	LRA 127	7, 147, 148)	unless dis	sturbed or p	roblematic.
	_ayer (if observed):									
Type:										
Depth (ir	nches):						Hydric Soil Pres	ent?	Yes	No _X
Remarks:										
No nyaric soi	I indicator present.									



APPENDIX C

Project Stream Table

FIDDLESTIX SWITCH-ILESBORO SOUTH CENTRAL POWER 138 KV T-LINE PROJECT-ADDENDUM 2 STREAM TABLE

	Loc	ation			Delineated	Bankfull	OHWM		Field Eva	aluation		Р	Propose	d Impacts
Stream ID	Latitude	Longitude	Stream Type	Stream Name	Length (feet)	Width (feet)	Width (feet)	Method	Score	Category / Rating / OAC Designation	Ohio EPA 401 Eligibility	Stream Crossing	Fill Type	Length (LF)
S-WRL-001	39.37777	-82.45237	Intermittent	UNT to Brushy Creek	228	3.8	2.3	HHEI	36	Class II PHW	Eligible	TBD	None	N/A
S-WRL-002	39.37765	-82.45277	Ephemeral	UNT to Brushy Creek	73	1.2	1.1	HHEI	23	Class I PHW	Eligible	TBD	None	N/A
S-WRL-003	39.37735	-82.45232	Perennial	Brushy Creek	590	4.5	3.5	HHEI	60	Class III PHW	Eligible	TBD	None	N/A
S-WRL-004	39.37740	-82.45272	Intermittent	UNT to Brushy Creek	180	3.9	2.8	HHEI	43	Class II PHW	Eligible	TBD	None	N/A
S-WRL-005	39.37642	-82.45178	Intermittent	UNT to Brushy Creek	284	3.8	3.5	HHEI	35	Class II PHW	Eligible	TBD	None	N/A
S-WRL-006	39.37455	-82.45599	Ephemeral	UNT to Brushy Fork	254	2.7	1.5	HHEI	18	Class I PHW	Eligible	TBD	None	N/A
S-WRL-007	39.37468	-82.45592	Intermittent	UNT to Brushy Fork	184	5.2	4	HHEI	56	Class III PHW	Eligible	TBD	None	N/A
S-WRL-008	39.37512	-82.44843	Perennial	Brushy Creek	220	8.3	7.2	HHEI	71	Class III PHW	Eligible	TBD	None	N/A
S-WRL-009	39.37515	-82.44740	Intermittent	UNT to Brushy Creek	56	2.4	2	HHEI	41	Class II PHW	Eligible	TBD	None	N/A
S-WRL-010	39.37549	-82.44501	Intermittent	UNT to Brushy Creek	307	4.7	4.1	HHEI	60	Class II PHW	Eligible	TBD	None	N/A
				Total:	2,376									0



APPENDIX D

OEPA Stream Data Forms

Delineated Features Photographs

(combined per wetland and shown in numerical order)

Upland Drainage Feature Photographs

S-WRL-001 Class II PHW

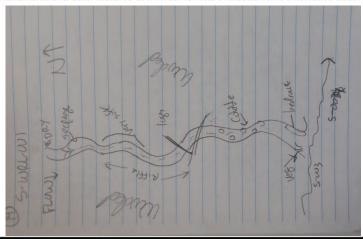
Protection Agency Headwater Habitat Evalu	uation Index Field Form HHEI Score (sum of metrics 1+2+3)
SITE NAME/LOCATIONAEP llesboro 138 kV Project SITE NUMBERS-WRL-001RIVER BASINSoutheast Ohio TributariesRIV_ LENGTH OF STREAM REACH (ft)200LAT39.37777 DATE9/01/2022SCORERWRL, CRWCOMMENTSIntel_ NOTE: Complete All Items On This Form - Refer to "Headwater"	LONG -82.45237 RIVER MILE
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNE	EL RECOVERED RECOVERING RECENT OR NO RECOVERY
BOULDER (>256 mm) [16 pts]	
> 22.5 - 30 cm [30 pts]	
	rements) (Check <i>ONL</i> Yone box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8")[15 pts] ≤ 1.0 m (≤ 3' 3")[5 pts] AVERAGE BANKFULL WIDTH (meters) 1.20
	ust also be completed
L R (Per Bank) L R V Wide >10m	Wetland Conservation Tillage st, Shrub or Old Field Copen Pasture, Row Crop e Mining or Construction
FLOW REGIME (At Time of Evaluation) (Check ONLY or Stream Flowing Subsurface flow with isolated pools (interstitial) COMMENTS	Moist Channel, isolated pools, no flow (intermittent) Dry channel, no water (ephemeral)
SINUOSITY (Number of bends per 61 m (200 ft) of channe None 1.0 0.5 1.5 STREAM GRADIENT ESTIMATE Flat (0.5 %/100 ft) Flat to Moderate Moderate (2 ft/100 ft)	2.0

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score N/A (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) WWH Name: Brushy Creek Distance from Evaluated Stream 0.01 CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: New Plymouth NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A Township/City: Swan Township County: Vinton MISCELLANEOUS Base Flow Conditions? (Y/N) _____ Date of last precipitation: 08/31/2022 Quantity: 0.74" Photo-documentation Notes: 2650 - 2652 Elevated Turbidity?(Y/N): ____ Canopy (% open): 30 Were samples collected for water chemistry? (Y/N): N__ Lab Sample # or ID (attach results): N/A Field Measures:Temp (°C) 20.9 Dissolved Oxygen (mg/l) N/A pH (S.U.) 4.8 Conductivity (umhos/cm) N/A Is the sampling reach representative of the stream (Y/N) If not, explain: N/A Additional comments/description of pollution impacts: lowpit, acid mine drainage, iron oxide present Overall Stability of BOTH Stream Banks (check one): Stable **Moderately Stable** Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Species observed (if known): N/A Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): N/A Species observed (if known): N/A Aquatic Macroinvertebrates Observed? (Y/N) _ Species observed (if known):_Ephemeroptera Comments Regarding Biology: one Ephemeroptera observed.

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

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







Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-001

Date:

September 1, 2022

Description:

Intermittent

Class II PHW

Facing Upstream



Stream S-WRL-001

Date:

September 1, 2022

Description:

Intermittent

Class II PHW

Facing Downstream





PHOTOGRAPHIC RECORD

STREAMS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-001

Date:

September 1, 2022

Description:

Intermittent

Class II PHW

Substrate



S-WRL-002 Class I PHW

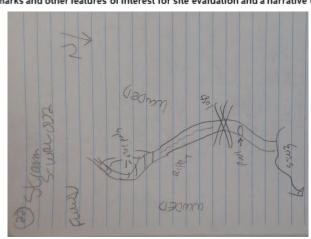
Headwater Habitat Evaluation Index Field Form HHEI Score (sum of metrics 1+2+3)	23
SITE NAME/LOCATION AEP llesboro 138 kV Project SITE NUMBER S-WRL-002 RIVER BASIN Southeast Ohio Tributaries RIVER CODE N/A DRAINAGE AREA (mi²) 0.1 LENGTH OF STREAM REACH (ft) 73 LAT 39.37765 LONG 82.45277 RIVER MILE 0.1 DATE 09/01/2022 SCORER WRL, CRW COMMENTS Ephemeral stream, flowing north to south	01
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Inst STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR N	
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE PERCENT TYPE BLDR SLABS [16 pts] 0% SILT [3 pt] 15% BOULDER (>256 mm) [16 pts] 0% LEAF PACKWOODY DEBRIS [3 pts] 5% BEDROCK [16 pts] 0% FINE DETRITUS [3 pts] 0% COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 0% GRAVEL (2-64 mm) [9 pts] 10% MUCK [0 pts] 0% SAND (<2 mm) [6 pts] 70% ARTIFICIAL [3 pts] 0% SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 4	HHEI Metric Points Substrate Max = 40 13
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts]	Pool Depth Max = 30
3. BANK FULL WIDTH (Measuredas the average of 3 - 4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts]	Bankfull Width Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream*	
RIPARIAN WIDTH L R (Per Bank) L R Wide >10m Mature Forest, Wetland I Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old Field Urban or Industrial Narrow <5m None Residential, Park, New Field Open Pasture, Row Cr Fenced Pasture COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (interstitial) COMMENTS Procent heavy rains contributing to flow SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	-
None	00 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score N/A (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) WWH Name: Brushy Creek Distance from Evaluated Stream 0.01 CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: New Plymouth NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A Township/City: Swan Township County: Vinton MISCELLANEOUS Base Flow Conditions? (Y/N): N Date of last precipitation: 08/31/2022 Quantity: 0.74" Photo-documentation Notes: 5476 - 5478 Elevated Turbidity?(Y/N): ____ Canopy (% open): 20 Were samples collected for water chemistry? (Y/N): NLab Sample # or ID (attach results): N/A Field Measures:Temp (°C) 19.9 Dissolved Oxygen (mg/l) N/A pH (S.U.) 6.4 Conductivity (umhos/cm) N/A Is the sampling reach representative of the stream (Y/N) If not, explain: N/A Additional comments/description of pollution impacts: N/A Overall Stability of BOTH Stream Banks (check one): Stable **Moderately Stable** Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known): N/A Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): N/A Salamanders Observed? (Y/N) Species observed (if known): N/A Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): N/A Comments Regarding Biology: None observed.

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

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







Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-002

Date:

September 1, 2022

Description:

Ephemeral

Class I PHW

Facing Upstream



Stream S-WRL-002

Date:

September 1, 2022

Description:

Ephemeral

Class I PHW

Facing Downstream





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Stream S-WRL-002

Date:

September 1, 2022

Description:

Ephemeral

Class I PHW

Substrate



S-WRL-003 Class III PHW

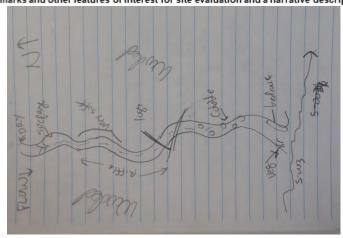
Protection Agency Headwater Habitat Evaluation Index Field Form HHEI Score (sum of metrics 1+2+3)	₃₎ 60
SITE NAME/LOCATION AEP llesboro 138 kV Project/ Brushy Creek SITE NUMBER S-WRL-003 RIVER BASIN Southeast Ohio Tributaries RIVER CODE N/A DRAINAGE AREA (miles Length of Stream Reach (ft) 200 LAT 39.37735 LONG 82.45232 RIVER MILES DATE 9/1/2022 SCORER WRL, CRW COMMENTS NHD mapped stream (Brushy Creek) NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for	2.2
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT	OR NO RECOVERY
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & TYPE PERCENT TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] 5% COBBLE (65-256 mm) [12 pts] 5% GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 1 SUBSTRATE (Name to Control of Name to Substrate Types) SUBSTRATE (Estimate percent). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & TYPE boxes. (B) SILT [3 pt] LEAF PACKWOODY DEBRIS [3 pts] O% CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts] Substrate Percentage Check TOTAL NUMBER OF SUBSTRATE TYPES: 5	B HHEI Metric Points Substrate Max = 40 20 A + B
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts]	Pool Depth Max = 30
3. BANK FULL WIDTH (Measuredas the average of 3 - 4 measurements) (Check ONL Y one box): > 4.0 meters (> 13') [30 pts]	Bankfull Width Max=30
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstructions. RIPARIAN WIDTH FLOODPLAIN QUALITY (Most Predominant per Bank) L R (Per Bank) L R V Wide >10m Mature Forest, Wetland Conservation Tilla Moderate 5-10m Immature Forest, Shrub or Old Field Urban or Industria Narrow <5m Residential, Park, New Field Open Pasture, Roman None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (intermediate Subsurface flow with isolated pools (interstitial) Dry channel, no water (ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 O.5 3.0	ige al ow Crop uction
STREAM GRADIENT ESTIMATE	(10 fl/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score N/A (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) WWH Name: Racoon Creek (LRW) Distance from Evaluated Stream 4.8 CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: New Plymouth NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A Township/City: Swan Township County: Vinton MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: 08/31/2022 Quantity: 0.74" Photo-documentation Notes: 2653 - 2662 Elevated Turbidity?(Y/N): ____ Canopy (% open): 40 Were samples collected for water chemistry? (Y/N): NLab Sample # or ID (attach results): N/A Field Measures:Temp (°C) 19.9 Dissolved Oxygen (mg/l) N/A pH (S.U.) 6.9 Conductivity (umhos/cm) N/A Is the sampling reach representative of the stream (Y/N) If not, explain: N/A Additional comments/description of pollution impacts: N/A Overall Stability of BOTH Stream Banks (check one): Stable **Moderately Stable** Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known): N/A Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): N/A Salamanders Observed? (Y/N) N Species observed (if known): N/A Aquatic Macroinvertebrates Observed? (Y/N) Y Species observed (if known): N/A Comments Regarding Biology: Water oarsmen, water striders

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

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







Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-003

Date:

September 1, 2022

Description:

Perennial

Class III PHW

Facing Upstream



Stream S-WRL-003

Date:

September 1, 2022

Description:

Perennial

Class III PHW

Facing Substrate





PHOTOGRAPHIC RECORD

STREAMS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-003

Date:

September 1, 2022

Description:

Perennial

Class III PHW

Facing Downstream



S-WRL-004 Class II PHW

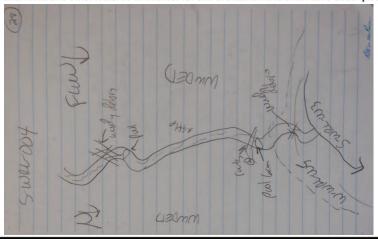
Protection Agency Headwater Habitat Evaluation Index HHEI Score (st	K Field Form um of metrics 1+2+3) 43
SITE NAME/LOCATION AEP llesboro 138 kV Project SITE NUMBER S-WRL-004 RIVER BASIN Southeast Ohio Tributaries RIVER CODE N/A LENGTH OF STREAM REACH (ft) 180 LAT 39.37740 LONG -82.45272 DATE 9/1/2022 SCORER WRL, CRW COMMENTS Flowing north into S-WRL-00 NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED	03 (Brushy Fork) Index Field Manual" for Instructions
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predomina (Max of 32). Add total number of significant substrate types found (Max of 8). Final metr TYPE PERCENT TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] C SILT [3 pt] LEAF PACK/WOODY D	int substrate TYPE boxes. ic score is sum of boxes A & B PERCENT 20% DEBRIS [3 pts] 5% Substrate
BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: BEDROCK [16 pts] O% MUCK [0 pts] ARTIFICIAL [3 pts] Substrate Percentage Check 100 TOTAL NUMBER OF	pt]
→ 30 centimeters [20 pts] ✓ 5 cm - 10 cm [15 pts] → 22.5 - 30 cm [30 pts] → 5 cm [5pts] → 10 - 22.5 cm [25 pts] NO WATER OR MOIS	eck ONLY one box): Max = 30
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check C > 4.0 meters (> 13') [30 pts]	" - 4' 8")[15 pts] Width
This information mustals obe complete RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and R RIPARIAN WIDTH FLOODPLAIN QUALITY (Most Predo	Right (R) as looking downstream*
L R (Per Bank) L R V Wide >10m	L R Conservation Tillage
	isolated pools, no flow (intermittent) o water (ephemeral)
None	3.0 >3 Severe Severe (10 fb/100 fb)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score N/A (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) WWH Name: Brushy Creek Distance from Evaluated Stream 0.01 CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: New Plymouth NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A Township/City: Swan Township County: Vinton MISCELLANEOUS Base Flow Conditions? (Y/N) Date of last precipitation: 08/31/2022 Quantity: 0.74" Photo-documentation Notes: 2656 - 2658 Elevated Turbidity?(Y/N): ____ Canopy (% open): 30 Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): N/A Field Measures:Temp (°C) 19.5 Dissolved Oxygen (mg/l) N/A pH (S.U.) 6.6 Conductivity (umhos/cm) N/A If not, explain: N/A Is the sampling reach representative of the stream (Y/N) Additional comments/description of pollution impacts: N/A Overall Stability of BOTH Stream Banks (check one): Stable **Moderately Stable** Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known): N/A Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): N/A Salamanders Observed? (Y/N) Species observed (if known): N/A Aquatic Macroinvertebrates Observed? (Y/N) Y Species observed (if known): Plecoptera, snail eggs Comments Regarding Biology: Minimal observed.

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

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







Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-004

Date:

September 1, 2022

Description:

Intermittent

Class II PHW

Facing Upstream



Stream S-WRL-004

Date:

September 1, 2022

Description:

Intermittent

Class II PHW

Facing Downstream





PHOTOGRAPHIC RECORD

STREAMS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-004

Date:

September 1, 2022

Description:

Intermittent

Class II PHW

Substrate



S-WRL-005 Class II PHW

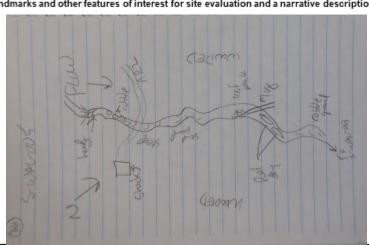
Chio Environmental Protection Agency	Headwate	er Habitat E	valuation In HHEI Score	dex Field e(sum of me		35
	NAEP llesboro 138 kV P					
	L-005 RIVER BASIN				OL AKLA (IIIF)	08
LENGTH OF STREAM	\ / 	LAT 39.37642	LONG82.4		_ RIVER MILE	01
DATE 09/01/2022	SCORER WRL, CRW	COMMENTS				
NOTE: Complete All	I Items On This Form	- Refer to "Headw	ater Habitat Evalua	ition Index Field	Manual" for Inst	tructions
STREAM CHANNEL	MODIFICATIONS:	NONE / NATURAL CI	HANNEL RECOVERE	ED RECOVERIN	NG RECENT OR N	NO RECOVERY
	(Estimate percent of e					HHEI
TYPE	PE	RCENT TYPE	, ,	metric score is su	PERCENT	Metric
	ABS [16 pts] 2 (>256 mm) [16 pts]	0%	SILT [3 pt] LEAF PACK/WOO	DY DEBRIS [3 pts	<u>15%</u> 5%	Points
	[16 pts]	0%	FINE DETRITUS	[3 pts]	_0%	Substrate Max = 40
==	(65-256 mm) [12 pts] (2-64 mm) [9 pts]	5% 25%	CLAY or HARDPA MUCK [0 pts]	N [0 pt]	0% 0%	
		50%	ARTIFICIAL [3 pt		0%	20
Total of Po	ercentages of 5	.00%	Substrate Percentaç Check	100%		
,	lder, Cobble, Bedrock ST PREDOMINATE SUBS	(A)	5 TOTAL NUMBE	R OF SUBSTRAT	(B) F TYPES: 5	A + B
	ool Depth (Measure the					Pool Depth
time of evalua	ation. Avoid plunge pools		storm water pipes)	(Check ONLY one		Max = 30
> 30 centimete > 22.5 - 30 cm		<u> </u>	5 cm - 10 cm [1 < 5 cm [5pts]	5 pts]		
> 10 - 22.5 cm		Ĺ		MOIST CHANNEL	[0pts]	0
COMMENTS	Dry		MAXIMUM	POOL DEPTH (ce	ntimeters): 0.00	
3. BANK FULL	WIDTH (Measuredas th	ne average of 3 - 4 m	easurements) (Che	eck ONLY one bo	x):	Bankfull
> 4.0 meters (> 13') [30 pts] n (> 9' 7"- 13') [25 pts]		> 1.0 m - 1.5 m (< 1.0 m (< 3' 3")	> 3′ 3″ - 4′ 8″)[15 p	ts]	Width Max=30
	n (> 4' 8" - 9' 7")[20 pts]	L	<u></u>	[a bra]		
COMMENTS	3.8' wide		AVERAGE	BANKFULL WIDT	H (meters) 1.15	15
			on <u>must</u> also be com			
	RIAN ZONE AND FLOOD					
	ARIAN WIDTH Per Bank)	L R	AIN QUALITY (Most F	Predominant per B L R	ank)	
	de >10m		orest, Wetland		onservation Tillage	
==	derate 5-10m		Forest, Shrub or Old		ban or Industrial	
Nar Nar	row <5m	Resident	ial, Park, New Field		oen Pasture, Row Cr ning or Construction	-
	ENTS	reliced i	astarc		ning of construction	1
	REGIME (At Time of Eve	aluation) (Check Ol	VLY one box):			_
=	Flowing		=		s, no flow (intermitte	ent)
_	face flow with isolated po IENTS	ols (interstitial)	✓ Dry change	nel, no water (ephe	emeral)	
	SITY (Number of bends	per 61 m (200 ft) of c	hannel) (Check ONL)	/ one box):		_
None		1.0	2.0		3.0	
0.5	✓	1.5	2.5		>3	
STREAM GR Flat (0.5 ft/100 ft)	ADIENT ESTIMATE Flat to Moderate	Moderate (2 €/10	o fi) / Modera	te to Severe	Severe (10 ft/	100 ft)
					_	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score N/A (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) WWH Name: Brushy Creek Distance from Evaluated Stream 0.01 CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: New Plymouth NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A Township/City: Swan Township County: Vinton MISCELLANEOUS Base Flow Conditions? (Y/N): __ Date of last precipitation: 08/31/2022 Quantity: 0.74" Photo-documentation Notes: 5549-5551 Elevated Turbidity?(Y/N): N ____ Canopy (% open): 20 Were samples collected for water chemistry? (Y/N): NLab Sample # or ID (attach results): N/A Field Measures:Temp (°C) N/A Dissolved Oxygen (mg/l) N/A pH (S.U.) N/A Conductivity (umhos/cm) N/A Is the sampling reach representative of the stream (Y/N) If not, explain: N/A Additional comments/description of pollution impacts: N/A Overall Stability of BOTH Stream Banks (check one): Stable **Moderately Stable** Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known): N/A Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): N/A Salamanders Observed? (Y/N) Species observed (if known): N/A Aquatic Macroinvertebrates Observed? (Y/N) Species observed (if known): N/A Comments Regarding Biology: None observed.

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

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







Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-005

Date:

September 1, 2022

Description:

Intermittent

Class II PHW

Facing Upstream



Stream S-WRL-005

Date:

September 1, 2022

Description:

Intermittent

Class II PHW

Facing Downstream





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Stream S-WRL-005

Date:

September 1, 2022

Description:

Intermittent

Class II PHW

Substrate



S-WRL-006 Class I PHW

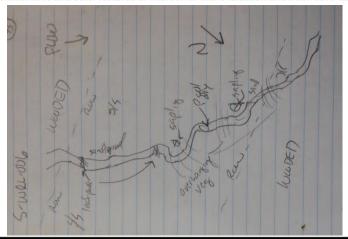
Protection Agency Headwater Habitat Evaluation Index Field Form HHEI Score (sum of metrics 1+2+	+3) 18
SITE NAME/LOCATION AEP llesboro 138 kV Project SITE NUMBER S-WRL-006 RIVER BASIN Southeast Ohio Tributaries RIVER CODE N/A DRAINAGE AREA (n LENGTH OF STREAM REACH (ft) 200 LAT 39.37455 LONG 82.45599 RIVER MIL DATE 09/02/2022 SCORER WRL, CRW COMMENTS Ephemeral; Dry, flows NE through ROW to S-WRL-007 NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for STREAM CHANNEL MODIFICATIONS: NOTE: NOTE: NOTE: NOTE: RECOVERED RECOVERING RE	or Instructions
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A TYPE PERCENT TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] GRAVEL (2-64 mm) [9 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 1. SUBSTRATE (Estimate percent). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A TYPE boxes. (Max of 32). Add total number of significant substrate type found (Max of 8). Final metric score is sum of boxes A TYPE boxes. (Max of 32). Add total number of significant substrate type found (Max of 8). Final metric score is sum of boxes A TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A TYPE boxes. (Bay Total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A TYPE boxes. (Bay Total of Percentage of the substrate types found (Max of 8). Final metric score is sum of boxes A TYPE boxes. (Bay Total number of substrate Types found (Max of 8). Final metric score is sum of boxes A TYPE boxes. (Bay Total of Percentage of type for a ty	1
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check <i>ONL</i> Y one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8")[15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (≤ 3' 3")[5 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7")[20 pts]	Max = 30 O Bankfull Width Max=30 5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downs: RIPARIAN WIDTH FLOODPLAIN QUALITY (Most Predominant per Bank) L R (Per Bank) L R Wide >10m Mature Forest, Wetland Conservation Ti V Moderate 5-10m Mature Forest, Shrub or Old Field Urban or Indust Narrow <5m Residential, Park, New Field Open Pasture, Fenced Pasture COMMENTS	tream*
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	termittent)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score N/A (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) ✓ WWH Name: Brushy Fork Distance from Evaluated Stream 0.3-mile CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: Zaleski NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A Township/City: Swan Township County: Vinton MISCELLANEOUS Base Flow Conditions? (Y/N): Y __ Date of last precipitation: 08/31/2022 Quantity: 0.74" Photo-documentation Notes: 5554 - 5556 Elevated Turbidity?(Y/N): N ____ Canopy (% open): 40 Were samples collected for water chemistry? (Y/N): NLab Sample # or ID (attach results): N/A Field Measures:Temp (°C) N/A Dissolved Oxygen (mg/l) N/A pH (S.U.) N/A Conductivity (umhos/cm) N/A If not, explain: most of stream outside of ROW is wooded and a wider channel Is the sampling reach representative of the stream (Y/N) N Additional comments/description of pollution impacts: N/A Overall Stability of BOTH Stream Banks (check one): Stable **Moderately Stable** Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known): N/A Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): N/A Salamanders Observed? (Y/N) Species observed (if known): N/A Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): N/A

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

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





May 2020 Revision Page 2

Comments Regarding Biology: None observed.



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Stream S-WRL-006

Date:

September 2, 2022

Description:

Ephemeral

Class I PHW

Facing Upstream



Stream S-WRL-006

Date:

September 2, 2022

Description:

Ephemeral

Class I PHW

Facing Downstream





Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Stream S-WRL-006

Date:

September 2, 2022

Description:

Ephemeral

Class I PHW

Substrate



S-WRL-007 Class III PHW

Ohio Environmental Protection Agency	Headwater H		ation Index Fid HHEI Score (sum o		56
DATE 09/02/2022	AEP llesboro 138 kV Project 007 RIVER BASIN Southea REACH (ft) 184 LAT SCORER WRL, CRW tems On This Form - Refer	39.37468 COMMENTS Flows	LONG -82.45592 s west, parallel to ROW edge	DRAINAGE AREA (mi²) _0 RIVER MILE _0. x Field Manual" for Ins	3
STREAM CHANNEL M	MODIFICATIONS: NONE	E / NATURAL CHANNEL	. RECOVERED REC	OVERING RECENT OR N	IO RECOVERY
(Max of 32). Ad TYPE BLDR SLAE BOULDER BEDROCK COBBLE (6 GRAVEL (2 SAND (<2 n Total of Per Bidr Slabs, Bould	(>256 mm) [16 pts] 0% [16 pts] 0% 5-256 mm) [12 pts] 10% -64 mm) [9 pts] 30%	ibstrate types found (ITTYPE SILLE S		re is sum of boxes A & B PERCENT 15% 10% 0% 0% 0%	HHEI Metric Points Substrate Max = 40 21
time of evaluati > 30 centimeters > 22.5 - 30 cm [> 10 - 22.5 cm [COMMENTS	30 pts] 25 pts] IDTH (Measuredas the aver	ad culverts or storm	water pipes) (Check ON 5 cm - 10 cm [15 pts] 5 cm [5pts] 0 WATER OR MOIST CHA MAXIMUM POOL DEPT	ANNEL [0pts] TH (centimeters): 10.0	Pool Depth Max = 30 15 Bankfull Width
> 3.0 m - 4.0 m > 1.5 m - 3.0 m	> 9' 7"- 13') [25 pts] > 4' 8" - 9' 7") [20 pts] BF = 5.2' w x 1.0' d		1.0 m (<u><</u> 3' 3°) [5 pts]	WIDTH (meters) 1.58	20
RIPARIA	T AN ZONE AND FLOODPLAIN		stalsobe completed : River Left (L) and Right (F	R) as looking downstream*	
L R (Pe	w <5m	Mature Forest, \	t, Shrub or Old Field		-
FLOW F Stream F Subsurfa COMME	EGIME (At Time of Evaluation lowing ace flow with isolated pools (intention)	erstitial)	Moist Channel, isolate Dry channel, no wate	ed pools, no flow (intermitte er (ephemeral)	ent)
None 0.5	ITY (Number of bends per 61	m (200 ft) of channel	(Check ONLY one box): 2.0 2.5 Moderate to Severe	3.0 >3 Severe (10 N/	100 ft)

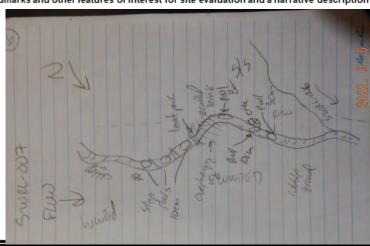
ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score N/A (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) ✓ WWH Name: Brushy Fork Distance from Evaluated Stream 0.3-mile CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: Zaleski NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A Township/City: Swan Township County: Vinton MISCELLANEOUS Base Flow Conditions? (Y/N): Y __ Date of last precipitation: 08/31/2022 Quantity: 0.74" Photo-documentation Notes: 5557 - 5559 Elevated Turbidity?(Y/N): N ____ Canopy (% open): 40 Were samples collected for water chemistry? (Y/N): Lab Sample # or ID (attach results): N/A Field Measures:Temp (°C) 19 Dissolved Oxygen (mg/l) N/A pH (S.U.) 5.8 Conductivity (umhos/cm) N/A If not, explain: N/A Is the sampling reach representative of the stream (Y/N) Additional comments/description of pollution impacts: N/A Overall Stability of BOTH Stream Banks (check one): Stable **Moderately Stable** Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known); N/A Frogs or Tadpoles Observed? (Y/N) Y Species observed (if known): N/A Salamanders Observed? (Y/N) Species observed (if known): N/A

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

_ Species observed (if known): Ephemeroptera; Plecoptera; Crayfish

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





May 2020 Revision Page 2

Aquatic Macroinvertebrates Observed? (Y/N)

Comments Regarding Biology: Several critters observed.



Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-007

Date:

September 2, 2022

Description:

Intermittent

Class III PHW

Facing Upstream



Stream S-WRL-007

Date:

September 2, 2022

Description:

Intermittent

Class III PHW

Facing Downstream





PHOTOGRAPHIC RECORD

STREAMS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-007

Date:

September 2, 2022

Description:

Intermittent

Class III PHW

Substrate



S-WRL-008 Class III PHW

Thio Headwater Habitat Evaluation Index Field Form HHEI Score (sum of metrics 1+2+3)	71
SITE NAME/LOCATION AEP llesboro 138 kV Project/ Brushy Creek SITE NUMBER S-WRL-008 RIVER BASIN Southeast Ohio Tributaries RIVER CODE N/A DRAINAGE AREA (mi²) 0.1 LENGTH OF STREAM REACH (ft) 200 LAT 39.37512 LONG -82.44843 RIVER MILE 2.2 DATE 09/02/2022 SCORER WRL, CRW COMMENTS Downstream crossing of S-WRL-003 (Brushy Creek); flowing south NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Instr	uctions
1. SUBSTRATE (Estimate percent of every type present). Check ONL Y two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE PERCENT TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] COBBLE (65-256 mm) [12 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 Check ONL Y two predominant substrate TYPE boxes. (Max of 32). Check ONL Y two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B PERCENT TYPE SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts] Substrate Percentage Check TOTAL NUMBER OF SUBSTRATE TYPES: 6	HHEI Metric Points Substrate Max = 40
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): 30 centimeters [20 pts]	Bankfull Width Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream* RIPARIAN WIDTH FLOODPLAIN QUALITY (Most Predominant per Bank) L R (Per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old Field Urban or Industrial Narrow <5m Residential, Park, New Field Open Pasture, Row Crown None Residential, Park, New Field Open Pasture, Row Crown None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (intermitter Subsurface flow with isolated pools (interstitial) Dry channel, no water (ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 2.5 3.5 STREAM GRADIENT ESTIMATE	ht)
Flat (0.5 N/100 N) Flat to Moderate Moderate (2 N/100 N) Moderate to Severe Severe (10 N/10	7

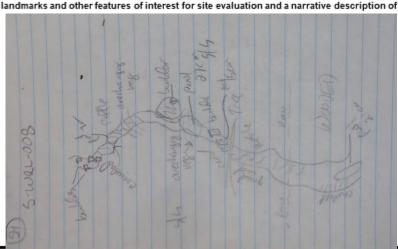
May 2020 Revision Page 1

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score N/A (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) ✓ WWH Name: Raccoon Creek (LRW) Distance from Evaluated Stream 4.6 CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: New Plymouth NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A _____ Township/City: Swan Township County: Vinton MISCELLANEOUS Base Flow Conditions? (Y/N) __ Date of last precipitation: 08/31/2022 Quantity: 0.74" Photo-documentation Notes: 5589 - 5591 Elevated Turbidity?(Y/N): ____ Canopy (% open): 80 Were samples collected for water chemistry? (Y/N): NLab Sample # or ID (attach results): N/A Field Measures: Temp (°C) 20.2 Dissolved Oxygen (mg/l) N/A pH (S.U.) 7.0 Conductivity (umhos/cm) N/A If not, explain: N/A Is the sampling reach representative of the stream (Y/N) Additional comments/description of pollution impacts: N/A Overall Stability of BOTH Stream Banks (check one): Stable **Moderately Stable** Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known): N/A Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): N/A Species observed (if known): Eurycea bislineata (adult and juve observed) Salamanders Observed? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Species observed (if known): Comments Regarding Biology: Salamanders seen

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

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





Page 2 May 2020 Revision



PHOTOGRAPHIC RECORD STREAMS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-008

Date:

September 2, 2022

Description:

Perennial

Class III PHW

Facing Upstream



Stream S-WRL-008

Date:

September 2, 2022

Description:

Perennial

Class III PHW

Facing Downstream





PHOTOGRAPHIC RECORD STREAMS

Site Location:

AEP

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-008

Date:

September 2, 2022

Client Name:

Description:

Perennial

Class III PHW

Substrate



S-WRL-009 Class II PHW

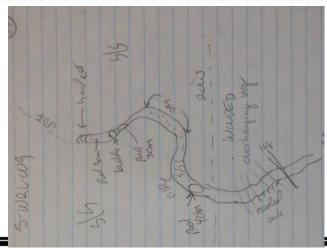
Headwater Habitat Evaluation Index Field Form HHEI Score (sum of metrics 1+2+3)	41
SITE NAME/LOCATION AEP Ilesboro 138 kV Project SITE NUMBER S-WRL-009 RIVER BASIN Southeast Ohio Tributaries RIVER CODE N/A DRAINAGE AREA (mi² LENGTH OF STREAM REACH (ft) 56 LAT 39.37515 LONG -82.44740 RIVER MILE DATE 09/02/2022 SCORER WRL, CRW COMMENTS Intermittent stream; starts partway through ROW; flowing south	0.01
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for	Instructions
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT	OR NO RECOVERY
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & TYPE PERCENT TYPE BLDR SLABS [16 pts] 0% SILT [3 pt] 5% BOULDER (>256 mm) [16 pts] 2% LEAF PACK/WOODY DEBRIS [3 pts] 5% BEDROCK [16 pts] 0% SEDENCE (16 pts] 3% CLAY or HARDPAN [0 pt] 0% GRAVEL (2-64 mm) [9 pts] 25% MUCK [0 pts] 0% SAND (<2 mm) [6 pts] 60% Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 6	B HHEI Metric Points Substrate Max = 40 21 A + B
Aximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONL Y one box): > 30 centimeters [20 pts]	Max = 30
3. BANK FULL WIDTH (Measuredas the average of 3 - 4 measurements) (Check <i>ONL</i> Y one box): > 4.0 meters (> 13') [30 pts]	Bankfull Width Max=30
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstrees. RIPARIAN WIDTH L R (Per Bank) L R Wide >10m Mature Forest, Wetland Moderate 5-10m Mining or Construction Residential, Park, New Field Mining or Construction COMMENTS	ge il w Crop
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	rmittent)
Flat (0.5 N/100 ft) Flat to Moderate Moderate (2 N/100 ft) Moderate to Severe Severe	(10 fl/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score N/A (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) WWH Name: Brushy Creek Distance from Evaluated Stream 0.01 CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: New Plymouth NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A Township/City: Swan Township County: Vinton MISCELLANEOUS Base Flow Conditions? (Y/N): Y __ Date of last precipitation: 08/31/2022 Quantity: 0.74" Photo-documentation Notes: 5596-5598 Elevated Turbidity?(Y/N): N ___ Canopy (% open): 40 Lab Sample # or ID (attach results): N/A Were samples collected for water chemistry? (Y/N): Field Measures:Temp (°C) 19.4 Dissolved Oxygen (mg/l) N/A pH (S.U.) 3.9 Conductivity (umhos/cm) N/A If not, explain: N/A Is the sampling reach representative of the stream (Y/N) Additional comments/description of pollution impacts: N/A Overall Stability of BOTH Stream Banks (check one): Stable **Moderately Stable** Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known): N/A Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): N/A Salamanders Observed? (Y/N) Species observed (if known): N/A Aquatic Macroinvertebrates Observed? (Y/N) Species observed (if known): Comments Regarding Biology: None observed

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

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





May 2020 Revision Page 2



PHOTOGRAPHIC RECORD STREAMS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-009

Date:

September 2, 2022

Description:

Intermittent

Class II PHW

Facing Upstream



Stream S-WRL-009

Date:

September 2, 2022

Description:

Intermittent

Class II PHW

Facing Downstream





PHOTOGRAPHIC RECORD STREAMS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Stream S-WRL-009

Date:

September 2, 2022

Description:

Intermittent

Class II PHW

Substrate



S-WRL-010 Class II PHW

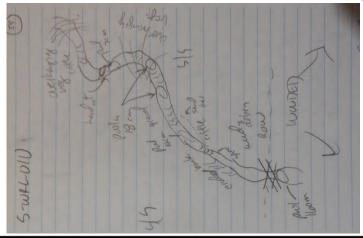
Chio Environmental Protection Agency	Headwater H	labitat Eva	luation Index HHEI Score (sun	Field Form n of metrics 1+2+3)	60
LENGTH OF STREAM R DATE 09/02/2022	AEP llesboro 138 kV Project 10	39.37549 COMMENTS Int	LONG -82.44501 ermittent stream, flowing sout	RIVER MILE _0	
STREAM CHANNEL M	ODIFICATIONS: NON	E / NATURAL CHANN	NEL RECOVERED F	RECOVERING RECENT OR I	NO RECOVERY
(Max of 32). Add TYPE BLDR SLABS BOULDER (2) COBBLE (65) GRAVEL (2-4) SAND (<2 mr Total of Perc Bidr Slabs, Boulde	256 mm) [16 pts] 0% 16 pts] 0% -256 mm) [12 pts] 5% 64 mm) [9 pts] 30% m) [6 pts] 50%	ubstrate types foun T TYPE		PERCENT 10% 1RIS [3 pts] 0% 0% 0% 0% (B)	HHEI Metric Points Substrate Max = 40 20 A + B
time of evaluatio > 30 centimeters > 22.5 - 30 cm [3] > 10 - 22.5 cm [2] COMMENTS O 3. BANK FULL WII	0 pts] 5 pts] 0HWM = 4.1'w x 0.6' d DTH (Measuredas the ave	oad culverts or stor	m water pipes) (Check 5 cm - 10 cm [15 pts] < 5 cm [5pts] NO WATER OR MOIST (MAXIMUM POOL D urements) (Check ON	CHANNEL [0pts] EPTH (centimeters): 18.04 LYone box):	Pool Depth Max = 30 25 Bankfull
> 1.5 m - 3.0 m (>	3') [30 pts] 9' 7"-13') [25 pts] 4' 8" - 9' 7") [20 pts] F = 4.3' w X 1.1'd		> 1.0 m - 1.5 m (> 3' 3" - ≤ 1.0 m (< 3' 3")[5 pts] AVERAGE BANKFU	4' 8")[15 pts]	Width Max=30
RIPARIA			nustalso be completed	nt (R) as looking downstream:	
L R (Per	AN WIDTH Bank) L 10m	R Mature Fores Immature For	QUALITY (Most Predomin L t, Wetland est, Shrub or Old Field Park, New Field		rop
Stream Flo Subsurfac COMMEN	ce flow with isolated pools (int TS	terstitial)	Moist Channel, iso		ent)
None 0.5	TY (Number of bends per 61 1.0 1.5 IENT ESTIMATE Flat to Moderate	m (200 ft) of chann Moderate (2 ft/100 ft)	nel) (Check ONLY one bo	3.0	100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed): QHEI PERFORMED? Yes No QHEI Score N/A (If Yes, Attach Completed QHEI form) DOWNSTREAM DESIGNATED USE(S) WWH Name: Brushy Creek Distance from Evaluated Stream 0.05 CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION. USGS Quadrangle Name: New Plymouth NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A Township/City: Swan Township County: Vinton MISCELLANEOUS Base Flow Conditions? (Y/N). Pate of last precipitation: 08/31/2022 Quantity: 0.74" Photo-documentation Notes: 2674-2676 Elevated Turbidity?(Y/N): ____ Canopy (% open): 60 Were samples collected for water chemistry? (Y/N): NLab Sample # or ID (attach results): N/A Field Measures:Temp (°C) 20.3 Dissolved Oxygen (mg/l) N/A pH (S.U.) 3.3 Conductivity (umhos/cm) N/A If not, explain: N/A Is the sampling reach representative of the stream (Y/N) Additional comments/description of pollution impacts: N/A **Moderately Stable** Overall Stability of BOTH Stream Banks (check one): Stable Unstable BIOLOGICAL OBSERVATIONS (Record all observations below) Fish Observed? (Y/N) N Species observed (if known): N/A Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): N/A Salamanders Observed? (Y/N) Species observed (if known): N/A Aquatic Macroinvertebrates Observed? (Y/N) Species observed (if known): Comments Regarding Biology: None observed

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

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





May 2020 Revision Page 2



PHOTOGRAPHIC RECORD STREAMS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Stream S-WRL-010

Date:

September 2, 2022

Description:

Intermittent

Class II PHW

Facing Upstream



Stream S-WRL-010

Date:

September 2, 2022

Description:

Intermittent

Class II PHW

Facing Downstream





PHOTOGRAPHIC RECORD STREAMS

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Stream S-WRL-010

Date:

September 2, 2022

Description:

Intermittent

Class II PHW

Substrate





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-001

Facing upstream



Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-001

Facing downstream





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-002

Facing upstream



Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-002

Facing downstream





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-002

Substrate



Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-003

Facing upstream





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-003

Facing downstream



Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-003

Substrate





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 30, 2020

Description:

UDF-WRL-004

Facing north



Upland Drainge Feature

Date:

September 30, 2020

Description:

UDF-WRL-004

Facing east





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-005

Facing upstream



Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-005

Facing downstream





PHOTOGRAPHIC RECORD UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 1, 2022

Description:

UDF-WRL-005

Substrate



Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-006

Facing upstream





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-006

Facing downstream



Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-006

Substrate





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-007

Facing upstream



Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-007

Facing downstream





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-007

Substrate



Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-008

Upstream





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-008

Downstream



Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-009

Facing Upstream





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-009

Facing downstream



Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-009

Substrate





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-010

Facing upstream



Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-010

Facing downstream





UPLAND DRAINAGE FEATURES

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No.

60624128

Upland Drainge Feature

Date:

September 2, 2022

Description:

UDF-WRL-010

Substrate





APPENDIX E

Habitat Photographs



HABITAT

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Photo Location 1

Date:

September 30, 2020

Description:

Grassland within Addendum 2 Project Survey Area

Facing North



Photo Location 1

Date:

September 30, 2020

Description:

Grassland within Addendum 2 Project Survey Area

Facing West





HABITAT

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Photo Location 2

Date:

September 1, 2022

Description:

Urban land within Addendum 2 Project Survey Area

ROW crossing Hwy 56

Facing East



Photo Location 3

Date:

September 1, 2022

Description:

Forest within proposed ROW

Facing North





HABITAT

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Photo Location 4

Date:

September 1, 2022

Description:

Forest within proposed ROW

Facing North



Photo Location 5

Date:

September 1, 2022

Description:

Landscaped habitat within ROW

Facing East





HABITAT

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Photo Location 6

Date:

September 2, 2022

Description:

Scrub-shrub habitat within ROW

Facing South



Photo Location 7

Date:

September 2, 2022

Description:

Old field habitat within ROW

Facing North





HABITAT

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Photo Location 7

Date:

September 2, 2022

Description:

Old field habitat within ROW

Facing West



Photo Location 8

Date:

September 2, 2022

Description:

Scrub-shrub habitat within ROW

Facing East





HABITAT

Client Name:

AEP

Site Location:

Fiddlestix Switch-Ilesboro South Central Power 138 kV Tranmission Line Project

Project No. 60624128

Photo Location 9

Date:

September 2, 2022

Description:

Hay Field/Pasture habitat within exisiting ROW

Facing East



Photo Location 9

Date:

September 2, 2022

Description:

Hay Field/Pasture habitat within exisiting ROW

Facing West





APPENDIX F

Agency Correspondence



Office of Real Estate John Kessler, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229

MARY MERTZ, DIRECTOR

Phone: (614) 265-6621 Fax: (614) 267-4764

September 30, 2022

Hannah Apatang AECOM 525 Vine Street Suite 1800 Cincinnati, OH 45202

Re: 22-0880; Fiddlestix Switch-Ilesboro South Central Power Transmission Line Extension Project

Project: The project proposes to install approximately 1.8 miles of greenfield 138 kV transmission line to tie the new Ilesboro delivery point to the Lemaster-Ross 138kV circuit.

Location: The proposed project is located in Swan Township, Vinton County, Ohio.

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

Natural Heritage Database: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area.

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

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

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species.

During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of little spectaclecase (*Villosa lienosa*), a state endangered mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact this species.

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, the Ohio lamprey (*Ichthyomyzon bdellium*), a state endangered fish, and the spotted darter (*Etheostoma maculatum*), a state endangered fish. The DOW recommends no inwater work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the timber rattlesnake (*Crotalus horridus*), a state endangered species, and a federal species of concern. The timber rattlesnake is a woodland species. In addition to using wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. This long-lived, entirely aquatic salamander inhabits perennial streams with large flat rocks. In-water work in hellbender streams can reduce availability of large cover rocks and can destroy hellbender nests and/or kill adults and juveniles. The contribution of additional sediment to hellbender streams can smother large cover rocks and gravel/cobble substrate (used by juveniles), making them unsuitable for refuge and nesting. Projects that contribute to altered flow regimes (e.g., by increasing areas of impervious surfaces or modifying the floodplain) can also adversely affect

hellbender habitat. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the midland mud salamander (*Pseudotriton montanus diastictus*), a state threatened species. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

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

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

The <u>local floodplain administrator</u> should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew Environmental Services Administrator

United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services 4625 Morse Road, Suite 104 Columbus, Ohio 43230 (614) 416-8993 / FAX (614) 416-8994



September 21, 2022

Project Code: 2022-0076728

Reference: Fiddlestix Switch - Ilesboro South Central Power 138kV Transmission Line Project, Addendum 2, Vinton County, Ohio

Dear Ms. Apatang,

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

Federally Threatened and Endangered Species: The endangered Indiana bat (Myotis sodalis) and threatened northern long-eared bat (Myotis septentrionalis) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see https://ecos.fws.gov/ecp/species/9045), incidental take of Indiana bats is still prohibited without

a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

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

Sincerely,

Patrice Ashfield Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW Eileen Wyza, ODNR-DOW



September 1, 2022

Attention: Mr. John Kessler

Ohio Department of Natural Resources

2045 Morse Road, Building E-2 Columbus, Ohio 43229-6693

Via email: environmentalreviewrequest@dnr.state.oh.us; NHDRequest@dnr.state.oh.us

Reference: Fiddlestix Switch-Ilesboro South Central Power 138kV Transmission Line

Project, Extension Vinton County, Ohio

Dear Mr. Kessler:

AEP Ohio Transmission Company, Inc. (AEP), is formally requesting that the Ohio Department of Natural Resources (ODNR) complete a review for the proposed Fiddlestix Switch-Illesboro South Central Power 138 kV Transmission Line Extension, Structures 85-91 (Project) located in Vinton County, Ohio. The Project is proposing to install approximately 1.8 miles of greenfield 138 kV transmission line to tie the new Ilesboro delivery point to the Lemaster-Ross 138kV circuit. The Project Study Area is located on the Zaleski and New Plymouth, Ohio U.S. Geologic Survey 7.5' topographical quadrangles as displayed on the Project Topographic Overview Map (Figure 1).

AECOM completed a desktop review of publicly available data to identify abandoned underground mines within 0.25-mile of the Project area. The data sources utilized include USGS topographical maps, aerial photography, and ODNR's Division of Mineral Resources and Geological Survey Data for Known Mining Activity and Karst Geology/Sinkholes as shown on Figure 1 and 2. Based on the available desktop resources, there are two (2) abandoned underground mine openings and several historic and inactive surface mines located within 0.25-mile of the Project. There are no karst features located within 0.25-miles of the Project.

Please provide us with the results of the ODNR's environmental review, including results of the ODNR Natural Heritage Database search, at your earliest convenience. If you have questions or need additional information regarding the Project, please contact me at the phone number or email below. Thank you for your assistance with this request.

Sincerely,

Hannah Apatang Ecologist III

Phone: (419-308-0980)

Email: hannah.pharesapatang@aecom.com

Attachments:

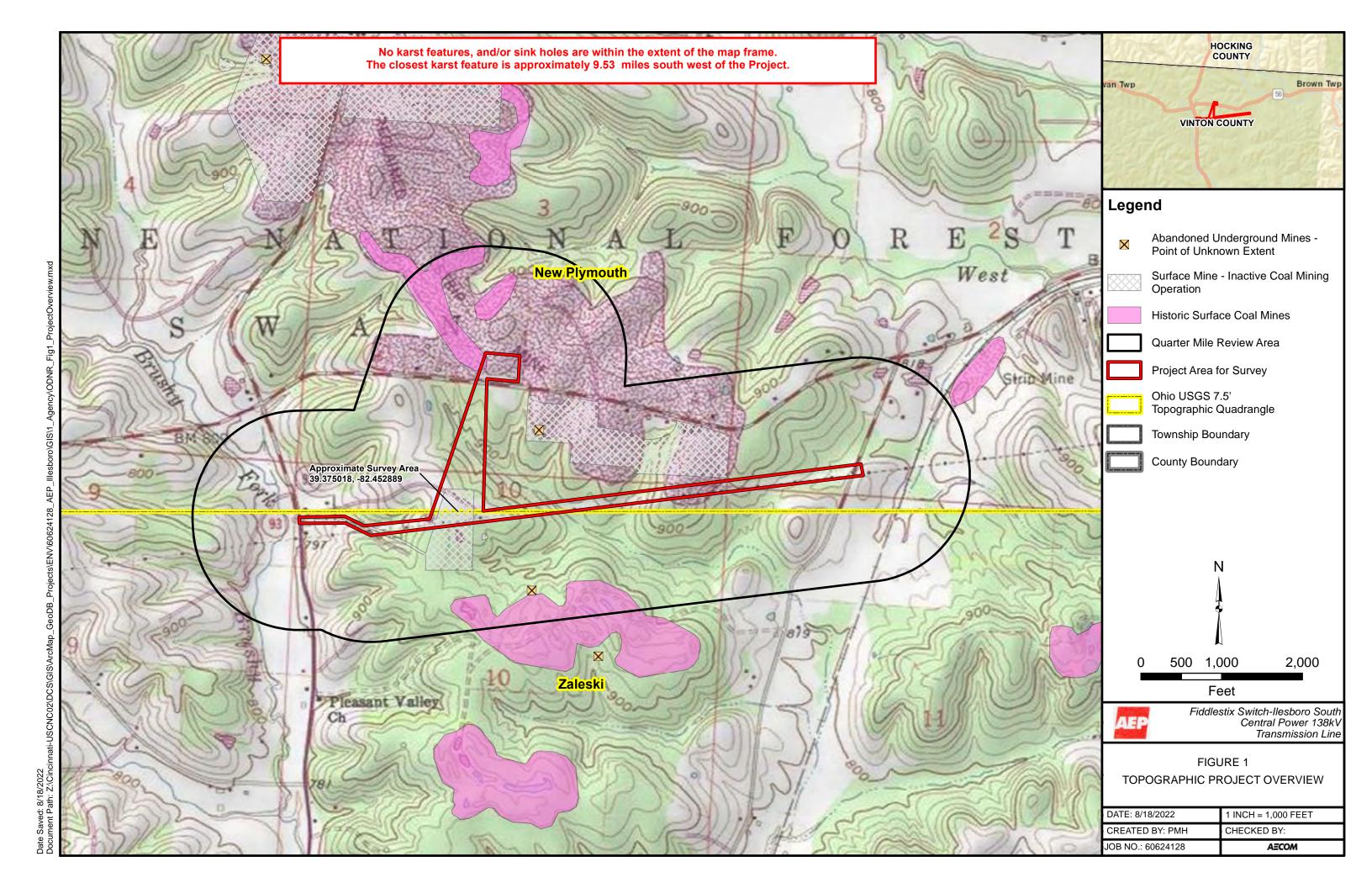
Figure 1 – Topographic Project Overview
Figure 2 – Aerial Project Overview
Natural Heritage Data Request Form
Flostronic Shapefiles (shap)

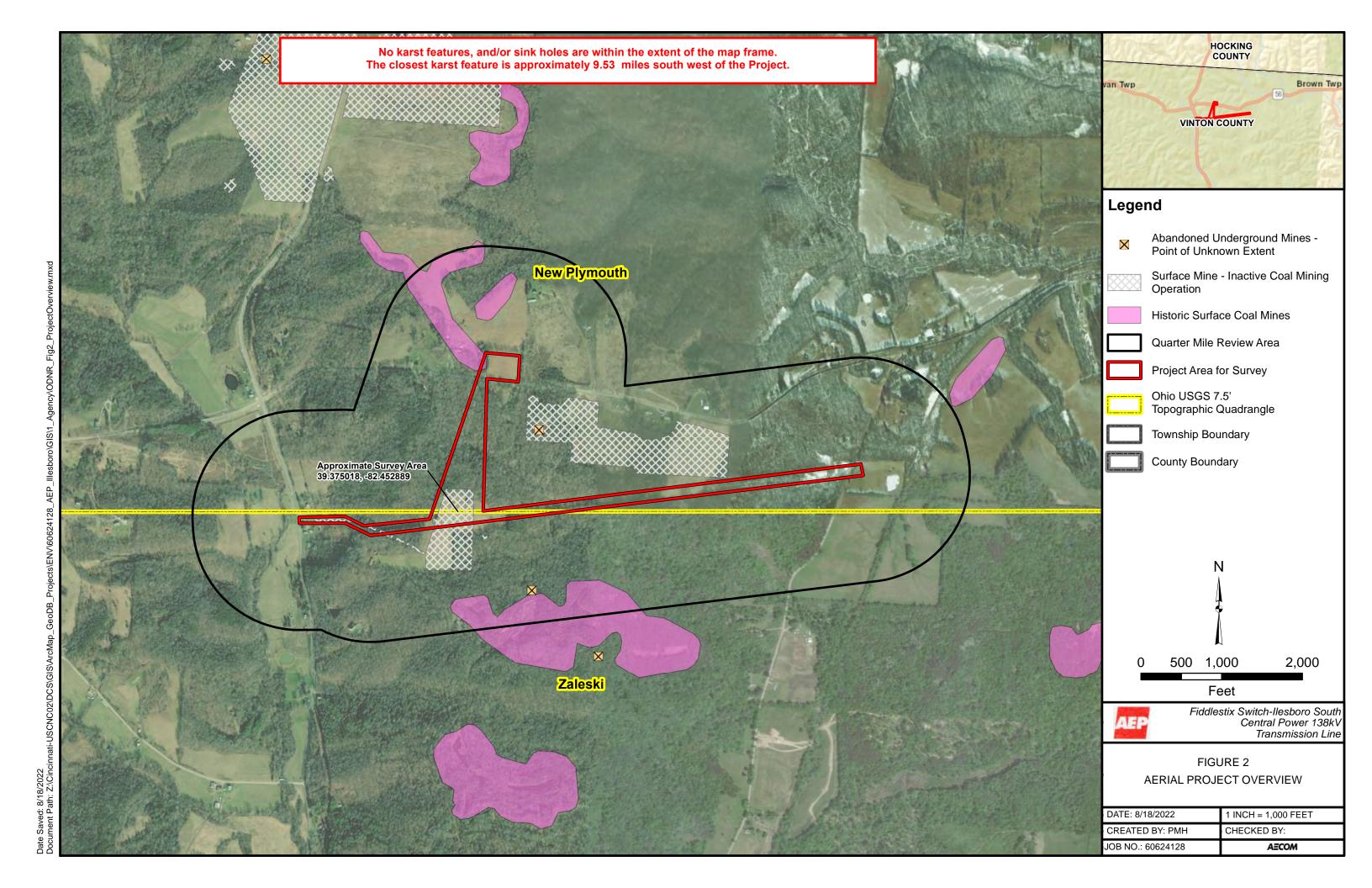
Electronic Shapefiles (.shp)

CC: Amy J. Toohey

Environmental Specialist-Consultant

Phone: (614-565-1480) Email: ajtoohey@aep.com





Ohio Department of Natural Resources **DIVISION OF WILDLIFE**



NATURAL HERITAGE DATA REQUEST FORM

ODNR Division of Wildlife

Ohio Natural Heritage Program
2045 Morse Rd., Bldg. G-3
Columbus, OH 43229-6693

Email: NHDRequest@dnr.state.oh.us

Phone: 614-265-6818

WHAT KIND OF REVIEW DO I NEED?

ODNR provides two kinds of project reviews, an Ohio Natural Heritage Database (ONHD) data request and an Environmental Review (ER). ONHD data requests will be processed for projects that meet one of the following four criteria:

- consultant prepared reports for ODOT projects
- completion of OEPA's Ohio Rapid Assessment Method for wetlands
- academic research projects
- other non-development or non-construction projects

As applicable to your project, the ONHD will provide records for state and federally listed plants and animals, high quality plant communities, geologic features, breeding animal concentrations, scenic rivers, protected natural areas (managed areas), and significant unprotected natural areas (conservation sites). A one mile radius around the project site will automatically be searched. Because the ONHD contains sensitive information, it is our policy to provide only the data needed to complete your specific project.

If your project does not meet one of these criteria, you will need to submit it for an ER. An ER includes comments on potential impacts to the species and their habitats, and therefore constitutes coordination with ODNR under NEPA, the Fish & Wildlife Coordination Act, the Federal Water Pollution Control Act, and other laws. If your project requires ODNR coordination, please go to http://realestate.ohiodnr.gov/environmental-review for additional information including appropriate contacts. An ONHD search is included as part of the environmental review process.

INSTRUCTIONS:

Please complete all the information on both sides of this form, sign (required) and email it to NHDRequest@dnr.state.oh.us. Please provide a description of the work to be performed at the project site, and a map detailing your project site boundaries. If you request a GIS response, please also submit a shapefile of your project site (unbuffered). Data requests will be completed within approximately 30 days. There is currently no charge to process requests.

Date: September 1, 202 Company name: AECOM Technical Services, Inc.
Name of person response letter should be addressed to: Mr. □ Ms. ✓ Hannah Apatang
Address: 525 Vine Street Suite 1800
City/State/Zip: Cincinnati, Ohio 45202
Phone: <u>419-308-0980</u>
E-mail address: <u>hannah.pharesapatang@aecom.com</u>

Project Name: Fiddlestix Switch-Ilesboro South Central Power 138kV Transmission Line Pr

Project Site Address: Linear Project Area - See Coordinates
Project County: Vinton
Project City or Township: New Plymouth
Project site is located on the following USGS 7.5 minute topographic quad(s):
New Plymouth and Zaleski
Project latitude and longitude: 39.37494, -82.44979

Description of work to be performed at the project site:

The Project is proposing to install approximately 1.8 miles of greenfield 138 kV transmission line to tie the new Ilesboro delivery point to the Lemaster-Ross 138kV circuit.

How do you want your data reported? Both formats provide the same data. The manual search is most appropriate for small scale projects or for those without GIS capabilities. With this option we will send you a letter with a list of records and a map showing their location. If you request a GIS shapefile, we will send you a letter and shapefile of data layers. You will then need to make your own map and list of data for your report. You must have GIS capabilities. If you do not make a selection or if you choose both options, a manual search will be performed (Please choose only one option).

☐ Printed list and map (manual search) **OR GIS** shapefile (computer search)

The standard data we search includes state and federally listed plants and animals, high quality plant communities, geologic features, breeding animal concentrations, scenic rivers, managed areas, and conservation sites, including a one mile radius around your project area. List any information in addition to this that you require:

Locations of wetlands that have records of state and/or federal endangered species and significant breeding/nonbreeding bird concentrations as well as presence of high quality wetlands.

How will the information be used?

Completion of OEPA's "Ohio Rapid Assessment Method for Wetlands" forms

The chief of the Division of Wildlife has determined that the release of the ONHD data you have requested could be detrimental to the conservation of a species or unique natural feature. Pursuant to section 1531.04 of the Ohio Revised Code, this information is not subject to section 149.43 of the Revised Code. By signing below, you certify that the data provided will not be disclosed, published, or distributed beyond the scope of your project.

This foregoing document was electronically filed with the Public Utilities Commission of Ohio Docketing Information System on

2/17/2023 11:20:26 AM

in

Case No(s). 23-0122-EL-BNR

Summary: Notice Construction Notice electronically filed by Hector Garcia-Santana on behalf of AEP Ohio Transmission Company, Inc.