# Letter of Notification Anguin – Brie 138 kV Transmission Line Project



BOUNDLESS ENERGY"

PUCO Case No. 22-1029-EL-BLN

Submitted to:

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

Submitted by:

American Electric Power Ohio Transmission Company, Inc.

November 22, 2022

#### Letter of Notification

## AEP Ohio Transmission Company, Inc. Anguin - Brie 138kV Transmission Line Project

## 4906-6-05

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

## 4906-6-5(B) General Information

## **B(1) Project Description**

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

The Company proposes the Anguin-Brie 138 kV Transmission Line Project ("Project"), which is in Licking County, Ohio. The Project involves the construction of a new 1.4-mile greenfield 138 kV transmission line between the existing Anguin Station and the Brie Station (filed separately as PUCO Case No. 22-0799-EL-BLN). The Anguin Extension No.4 Transmission Line (approved under PUCO Case No. 22-0648-EL-BNR) is required to be relocated to accommodate the tie-in of the Anguin-Brie 138kV Transmission Line at the Anguin Station. The Project will require a 60-ft wide transmission Right-of-Way (ROW).

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

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

- 1. New construction, extension, or relocation of single or multiple circuit electric power transmission line(s), or upgrading existing transmission or distribution line(s) for operation at a higher transmission voltage, as follows:
  - (d) Line(s) primarily needed to attact or meet the requirements of a specific customer or customers, as follows:
    - (ii) Any portion of the line is on property owned by someone other than the specific customer or applicant.

The Project has been assigned PUCO Case No. 22-1029-EL-BLN.

### 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.

A customer has requested a new substation to serve their facility requiring 84 MW of initial load and 240 MW of peak demand. To meet the customer's needs, the Company will be required to construct a new 138 kV station, Brie Station (filed separately as PUCO Case No. 0799-EL-BLN). Brie Station will become a through-path facility in the area and will be constructed with ten breakers in a breaker-and-a-half configuration. In order to serve the customer, the Company will also be required to construct approximately 1.4 miles of 138 kV double circuit transmission line from Anguin Station to the proposed Brie Station, which is subject of this request. Additionally, the Company will be required to relocate the existing Anguin Extension No. 4 138 kV transmission line at Anguin Station to accommodate the new 138 kV double circuit line between Anguin and Brie stations (filed separately as PUCO Case No. 22-0648-EL-BNR). The customer has requested an in-service date of June 1, 2023, for the initial load.

Failure to move forward with the proposed Project will result in the inability to serve the customer's load expectations and thereby jeopardize the customer's plans in the New Albany area (potentially 240 MW peak). The work to be constructed under this Project is only the work required to serve the initial 84 MW of load requested by the customer. As the customer moves forward toward the full 240 MW build out, any additional solutions required to serve the load will be taken through the PJM process and filed with OPSB as needed.

The need and solution for this supplemental project was presented and reviewed with stakeholders at the April 22, 2022, PJM SRRTEP meetings and assigned the PJM identifier s2781, Appendix B. The 2022 Long Term Forecast Report was submitted prior to the solution being identified and presented pursuant to PJM's M-3 process.

## **B(3) Project Location**

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

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

## **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 conducted an analysis that included initial investigations of alternative routes between the existing Anguin Station and proposed Brie Station. Due to multipe conservation easements, and extensive industrial/commercial development adjacent to the Anguin Station, the alternative routes were limited to

## Letter of Notification for Anguin - Brie 138 kV Transmission Line Project

two viable routes. The desktop examination of the two alternative routes concluded that the Proposed Route, shown in **Figure 2** of **Appendix A**, was the most feasible and appropriate route for the Project.

The goal of selecting a suitable route for the Project was to minimize impacts on land use as well as natural and cultural resources, while avoiding circuitous routes, significantly higher costs, and non-standard design requirements. The selection of the Proposed Route was based on siting decisions made throughout the process, the knowledge of the subject matter experts from the Company and the Company's consultant, communication with developers in the area, and a comparative analysis of potential impacts.

The Proposed Route limits the number of property owners impacted to one parcel that the Company has attained a supplemental easement for, while all other properties crossed are either owned by the Company or the customer. Additionally, the Proposed Route reduces the impact to the existing stream/wetland conservation easement and would not limit future development in the area. Other alternatives routes would have impeded future planned industrial/commercial developments. A wetland delineation and stream assessment were conducted for the Project site and a total of ten wetlands, five streams, and four sediment ponds were identified within the Project survey area.

The Project was designed to avoid placement of new structures within the identified resources, to the extent practicable. However, one wetland impact is proposed for both temporary timber matting activities and installation of a new structure, which cumulatively results in less than 0.10 acre of disturbance. Any other route alternative would have resulted in a greater impact to property owners, land use, future planned development, and have the potential for greater impact to ecological features. Therefore, the Proposed Route represents the most suitable location and appropriate solution for meeting the Company's and the customer'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 informs affected property owners and tenants about its projects through several different mediums. Within seven days of filing this LON, the Company will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements under Ohio Administrative Code ("O.A.C.") Section 4906-6-08(A)(1-6). Further, the Company will mail letters, via first class mail, to affected landowners, tenants, contiguous owners, and any other landowner the Company approached for an easement necessary for the construction, operation, or maintenance of the facility. The letter complies with all the requirements of O.A.C. Section 4906-6-08(B). The Company also maintains a website (http://aeptransmission.com/ohio/) which will provide the public access to an electronic copy of this LON and the public notice for this LON. An electronic copy of the LON will be served to the public library in each political subdivision affected by this proposed Project. The Company retains ROW land agents that discuss Project timelines, construction and restoration activities and convey information to affected owners and tenants throughout the Project.

### **B(6) Construction Schedule**

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

Construction of the Project is anticipated to begin in February 2023, and the anticipated in-service date is May 2024.

## B(7) Area Map

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

**Figure 1** provides the proposed Project area and existing transmission facilities on a map of 1:24,000-scale (1-inch equals 2,000 feet), showing the Project on a topographic map of the New Albany area provided by the National Geographic Society. **Figure 2** shows the Project area on recent aerial photography, dated 2020, as provided by the Environmental Systems Research Institute (ESRI), at a scale of 1:2,400 (1-inch equals 200 feet).

To visit the Project site from Columbus, Ohio, take I-670 East for approximately six miles and then merge onto I-270 N toward Cleveland. Continue on I-270 for approximately two miles, then take Exit 30 New Albany/OH 161E. Continue on OH 161E for 7.5 miles and then take the Township Highway 88/Beech Road exit. Turn right onto Beech Road and continue for approximately 1.5 miles. The approximate address of the Project site is 1101 Beech Road SW, at latitude 40.06656°, longitude -82.76547°

## **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 is provided in the table below. Parcels 094-106686-00.000 and 094-106914.00.000 are owned by the customer and easements have not been obtained at this time.

Property Parcel Number	Agreement Type	Easement or Option Obtained (Yes/No)
094-106896-00.000*	Supplemental Easement	Yes
094-106686-00.000	New Easement	No
094-106404-00.002	Company Owned	N/A
094-106914.00.000	New Easement	No

<sup>\*</sup> The Company has entered into a right of entry agreement with this property owner.

### **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.

Voltage: 138 kV

Conductors: Double Circuit, (2-bundle) 1033KCM ACSS 54/7 Strand, CURLEW

Static Wire: (2) 159KCM ACSR 12/7 Strand, GUINEA

Insulators: Polymer ROW Width: 100-foot

Structure Types: Five (5) 2-pole steel dead-end structures, two (2) mono-pole steel running angle

structures, and six (6) mono-pole steel tangent structures. All poles are self-supporting

on concrete pier foundations.

### 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\$8,483,000 from a Class 4 estimate. Pursuant to the PJM OATT, the costs for this Project will be recovered in the AEP Ohio Transmission Company's FERC formula rate (Attachment H-20 to the PJM OATT) and allocated to the AEP Zone.

## **B(10) Social and 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.

An aerial photograph of the Project vicinity is provided as **Figure 2**. The Project location and vicinity have historically been agricultural land and scrub-shrub vegetation with scattered woodlots throughout the Project area and recently have undergone land use change to light commercial and industrial use. The Project is located in the City of New Albany, Jersey Township, Licking County, Ohio. There are no parks, churches, cemeteries, wildlife management areas, or nature preserve lands within 1,000 feet of the Project.

## 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 Licking County Auditor provided a list of parcels registered as Agricultural District Land on May 31, 2022, which indicated that no Agricultural District Land was crossed by the Project. The Licking County Auditor was contacted again on July 19, 2022, and confirmed that no changes to the previously provided list had occurred, and the Agricultural District Land within the county will not change until January 2023 (**Appendix D**). As a result, the Project is not located within parcels identified as Agricultural District Land.

## 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.

A Phase I Archaeological Investigation and a separate History/Architecture Investigation for the Project occurred in May 2022. Two (2) previously identified archaeological sites and one new archaeological site were identified during the archaeological survey, but were not recommended as being eligible for listing in the National Register of Historic Places (NRHP). Additionally, no architectural resources of 50 years of age or older were identified within the Area of Potential Effect (APE). On May 20, 2022, the Ohio State Historic Preservation Office ("SHPO") concurred with the recommendations and stated that the Project will have no effect on historic properties and no further investigations or consultation with SHPO is necessary. Coordination with SHPO is provided as **Appendix 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 OHCooooo5. The Company will also coordinate storm water permitting needs with local government agencies, as necessary. The Company will implement and maintain best management practices as outlined in the Project-specific Storm Water Pollution Prevention Plan to minimize erosion and control sediment to protect surface water quality during storm events.

The Company's consultant conducted a stream and wetland delineation within the Project study area. Ten wetlands, five streams, and four ponds were identified within the Project study area, additional details regarding the delineated features are provided in Section (10) (f) below. One stream will be crossed by utilizing temporary timber mat bridge. Additionally, one wetland is proposed for both temporary timber matting activities and installation of a new structure. Due to avoidance of the stream's ordinary high-water mark (OHWM) and wetland impacts less than 0.10-acre, regulatory authorization from the United States Army Corps of Engineers (USACE) is not warranted as further clarified in **Section (10)(f)**.

No FEMA regulated floodplains or floodways will be disturbed by the Project.

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.

On May 10, 2022, coordination letters were sent to United States Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR) Ohio Natural Heritage Program (ONHP) and Division of Wildlife (DOW), seeking an environmental review for the Project for potential impacts to threatened and endangered species.

Responses were received from the USFWS on July 5, 2022, and from the ODNR on June 6, 2022. According to a response letter received from the USFWS, due to the project, type, size, and location, adverse effects to federally endangered, threatened, or proposed species or proposed designated critical habitat is not anticipated. Regarding state threatened and endangered species that may occur within the Project vicinity, nine species were listed by the ODNR. These species included: northern long-eared bat (*Myotis septentroinalis*), Indiana bat (*Myotis sodalist*), little brown bat (*Myotis lucifugus*), tricolored bat

## Letter of Notification for Anguin - Brie 138 kV Transmission Line Project

(*Perimyotis subflavus*), fawnsfoot (*Truncilla donaciformis*), lake chubsucker (*Erimyzon suceta*), least bittern (*Ixobrychus exilis*), northern harrier (*Circus hudsonis*), and upland sandpiper (*Bartramia longicauda*). A species review for each of these species and potential impacts from the Project was evaluated and a summary provided below.

Based on general observations during the ecological survey, minor forested clearing (approximately 0.10-acres) would be required for the Project located south of the existing Anguin Station. Anticipated tree clearing for the Project is proposed to occur within the recommended seasonal tree clearing period (between October 1 and March 31) as an effort to avoid adverse effects to Indiana bat, norther long-eared bat, little brown bat, and tricolored bat. As per ODNR/USFWS guidance, further coordination regarding potential hibernaculum is only necessary if a habitat assessment finds potential habitat within 0.25 mile of the Project area. The Company's consultant completed a desktop review for potential hibernaculum within 0.25 mile of the Project area and no caves, mines, and/or karst features were identified. Therefore, no further coordination is necessary with either the ODNR or USFWS regarding the listed bat species. Results of the desktop habitat assessment are included within **Appendix E**.

No impacts are anticipated to the fawnsfoot or lake chubsucker as no in-water work is proposed as part of the Project due to avoidance of perennial streams via timber mat bridges and/or complete avoidance.

The Project site is located within previously and actively disturbed areas that were not identified as suitable habitat for least bittern, northern harrier, and/or upland sandpiper. As per the ODNR initial guidance provided in **Appendix D**, these species are not likely to be impacted by the Project if their habitat will not be impacted. Therefore, no further coordination regarding the listed bird species was warranted regarding this Project.

A copy of the agency correspondence is provided in **Appendix D**. Additional information regarding habitat assessments within the Project area is provided within the Wetland Delineation and Stream Assessment Report found in **Appendix E**.

## 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 ecological survey report and Addendum which are provided in **Appendix E**. The survey of the Project area identified ten wetlands composed of six palustrine emergent (PEM) wetlands, one PEM/palustrine forested (PFO) wetland, two PFO wetlands, and one PFO/palustrine unconsolidated bottom (PUB) wetland. Additionally, five streams (three intermittent and two perennial) and four sediment ponds were identified within the Project area. The Company anticipates timber matting to be required for equipment access on one wetland and one stream crossing. The timber mat will be

## Letter of Notification for Anguin - Brie 138 kV Transmission Line Project

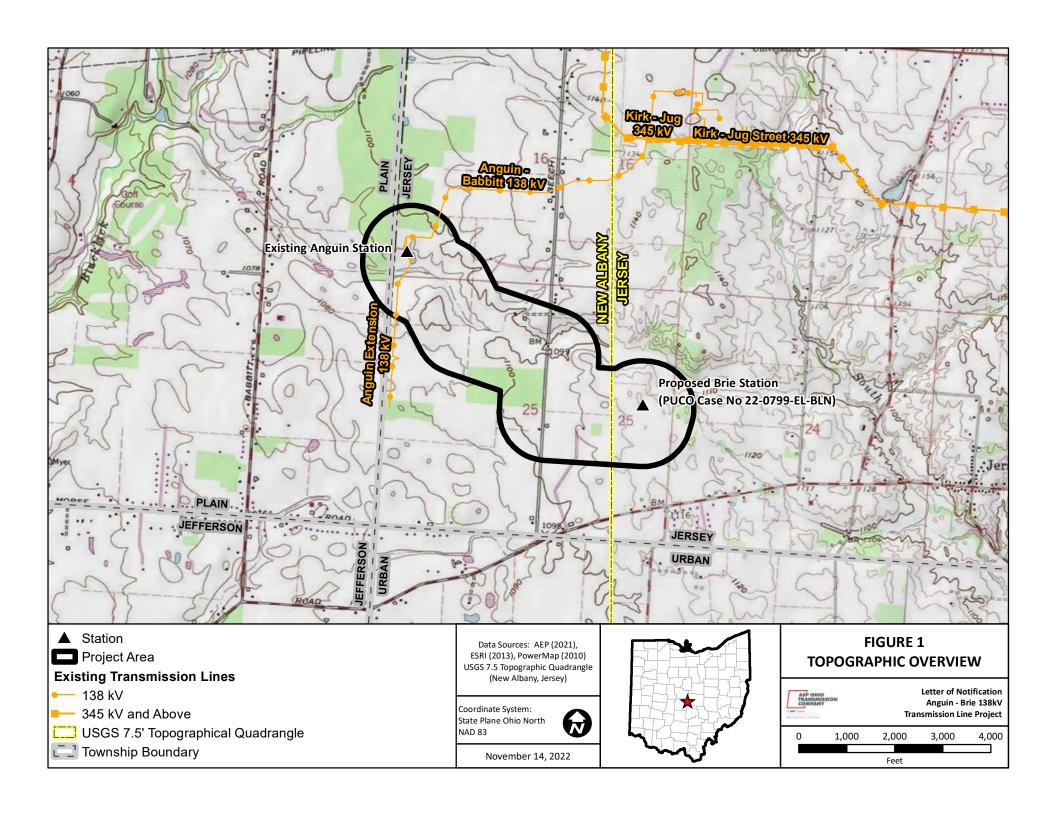
installed above the OHWM; therefore, no stream disturbances are anticipated for the Project. Additionally, the one PEM wetland crossing will also include installation of one structure as well as the timber matting activities, resulting in less than 0.10 acre of fill. Therefore, a Pre-Construction Notification (PCN) under the Nationwide Permit 57 to the USACE is not warranted, and the Project is compliant with non-reporting conditions of the Nationwide Permit 57 for automatic Section 404/401 authorization. No other streams, ponds, and/or wetlands will be impacted by this Project.

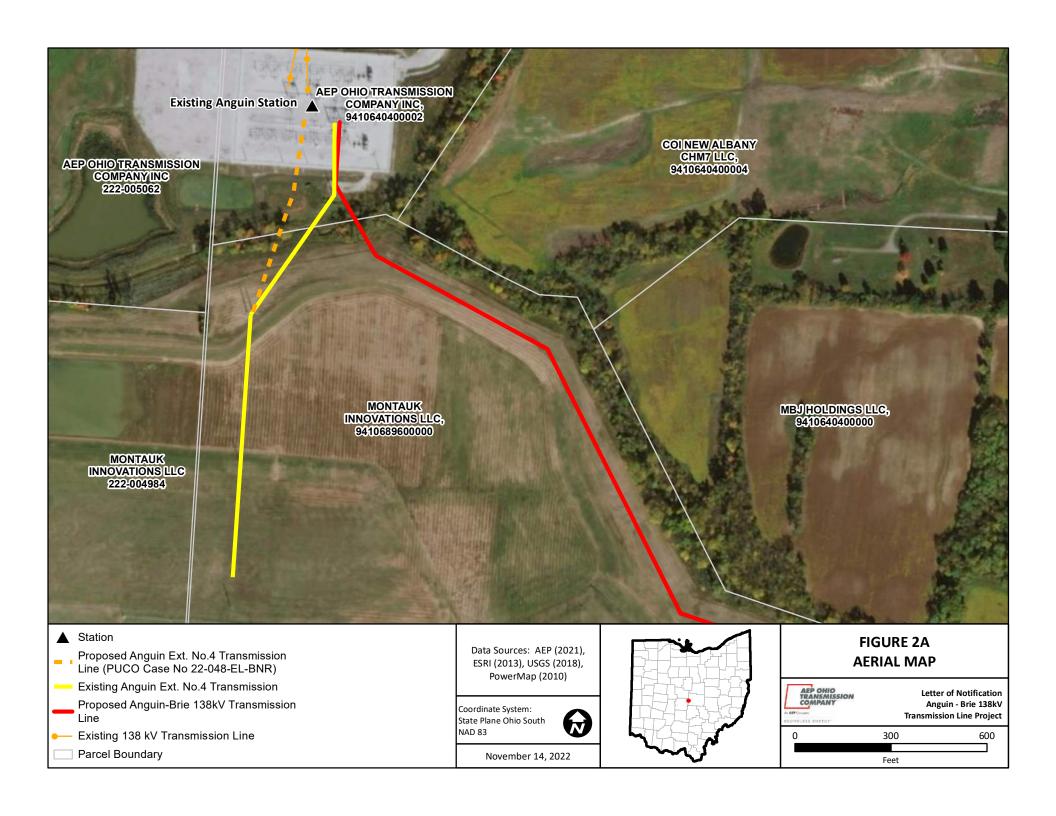
## B(10)(g) Unusual Conditions

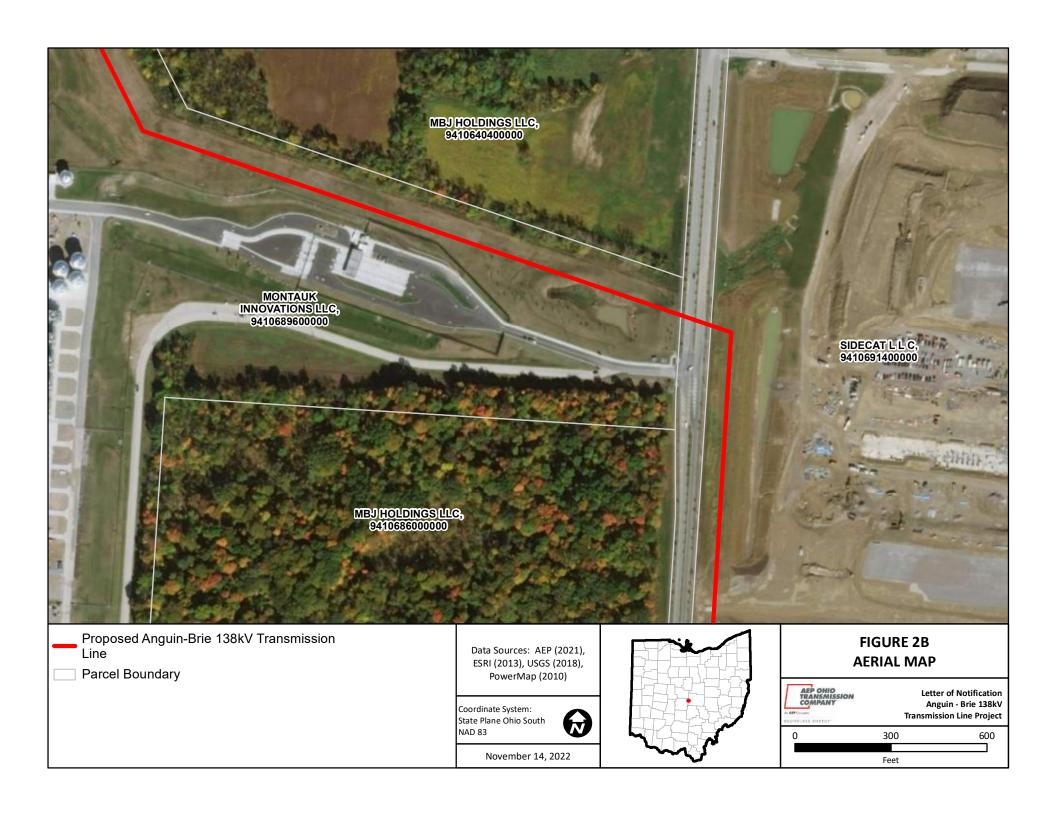
Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

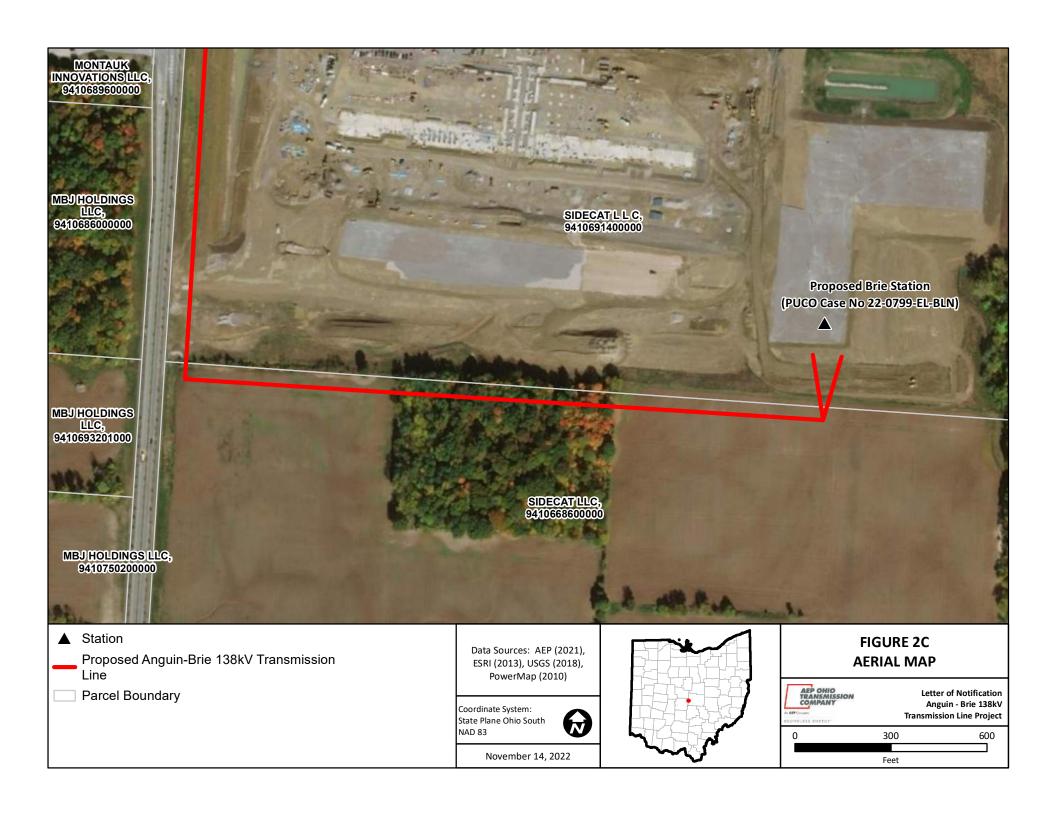
To the best of the Company's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

# **Appendix A Project Figures**









## **Appendix B PJM Slides**



## AEP Transmission Zone M-3 Process New Albany, Ohio

Need Number: AEP-2021-OH031

**Process Stage:** Solutions Meeting 4/22/2022

Previously Presented: Needs Meeting 5/21/2021

**Project Driver:**Customer Service

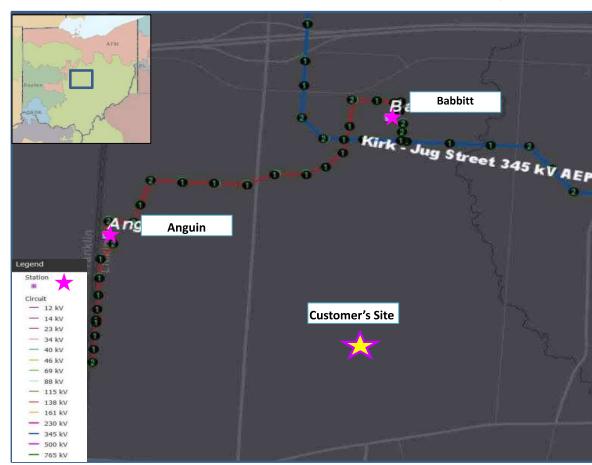
**Specific Assumption Reference:** 

AEP Connection Requirements for the AEP Transmission System (AEP Assumptions Slide 12)

## **Problem Statement:**

**Customer Service:** 

- A customer has requested transmission service at a site in New Albany, OH.
- The customer has indicated an initial peak demand of 84 MVA with an ultimate capacity of up to 240 MVA at the site.





Need Number: AEP-2021-OH031

**Process Stage:** Solutions Meeting 4/22/2022

#### **Proposed Solution:**

- Anguin 138 kV Station: Relocate the Anguin extension No. 4 into strings C & D at Anguin station installing two circuit breakers in each string to complete the strings. The new double circuit line to Brie station will be installed in strings A & B. Expand DICM to accommodate additional relays. Estimated Cost: \$1.33M
- Anguin Penguin DP1 138kV: Re-terminate the existing 138 kV Anguin Extension lines into strings C & D at Anguin Station. Estimated Cost: \$0.78M
- Brie 138kV Station: Establish the greenfield 138kV Brie station. Two full breaker and a half strings and 2 partial strings will be initially installed; total of ten (10) 138 kV breakers. Estimated Cost: \$11.04M
- Anguin Brie 138 kV: Build ~1.5 miles of greenfield 138kV double circuit line between Anguin and Brie station with 2 Bundle ACSS 1033.5 Curlew. Extend the telecom fiber into Brie station for relaying/communication. Short span construction and larger than normal foundations are required in this area to maintain clearances and paths for future development from the customers in the area, leading to higher than normal costs for this line. Estimated Cost: \$7.83M
- Brie Customer Why 1 138kV: Tie lines #1-4 to the customer's facility.
   Estimated Cost: \$0.11M

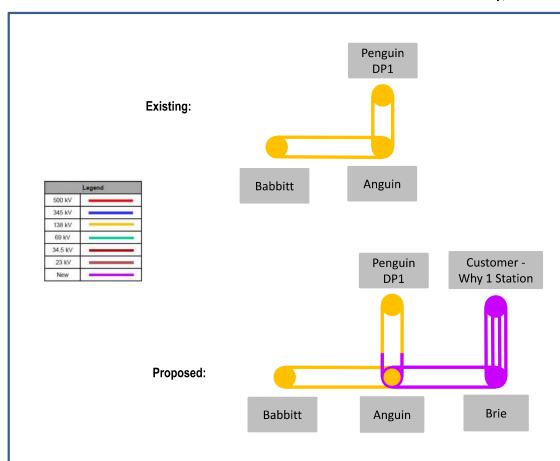
Total Estimated Transmission Cost: \$21.08M

Alternatives Considered: No cost effective alternate was determined.

Projected In-Service: 6/1/2023

**Project Status:** Scoping **Model:** 2026 RTEP

## AEP Transmission Zone M-3 Process New Albany, Ohio



## **Appendix C SHPO Coordination**



In reply, refer to 2022-LIC-54872

May 20, 2022

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

RE: Anguin-Brie 138kV Greenfield Transmission Line Project, Jersey Township, Licking County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on May 13, 2022 regarding the proposed Anguin-Brie 138kV Greenfield Transmission Line Project, Jersey Township, Licking 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 Cultural Resource Management Investigations for the Approximately 2.3 km* (1.4 mi) Anguin-Brie 138kV Greenfield Transmission Line Project in Jersey Township, Licking County, Ohio by Ryan J. Weller and Scott A. McIntosh (Weller & Associates, Inc. 2022).

A literature review, visual inspection, surface collection, shovel probe and shovel test unit excavation was completed as part of the investigations. Two (2) previously identified archaeological sites are located within the project area, Ohio Archaeological Inventory (OAI) # 33LI2271 and 33LI2272. These sites were not relocated during survey. One (1) new archaeological site was identified during survey. OAI#33LI3211 is not recommended eligible for listing in the NRHP. Our office agrees with this recommendation and no additional archaeological investigation is needed. No architectural resources 50 years of age or older were identified in the Area of Potential Effect (APE).

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 <a href="mailto:khorrocks@ohiohistory.org">khorrocks@ohiohistory.org</a>. Thank you for your cooperation.

Sincerely,

Krista Horrocks, Project Reviews Manager

Resource Protection and Review

RPR Serial No: 1093360

## Appendix D Agency Correspondence

## Miller, Brian

From: Ohio, FW3 <ohio@fws.gov>
Sent: Tuesday, July 5, 2022 2:30 PM

To: Holmes, Joshua

**Cc:** Miller, Brian; ajtoohey@aep.com

**Subject:** [EXTERNAL] AEP - Anguin - Brie 138kV Transmission Line, Licking County, Ohio

Follow Up Flag: Follow up Flag Status: Completed



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



Project Code: 2022-0045339

Dear Mr. Holmes,

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  $\geq 3$  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  $\geq 3$  inches dbh cannot be avoided, we recommend removal of any trees  $\geq 3$  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 <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>), 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 <a href="mailto:mike.pettegrew@dnr.state.oh.us">mike.pettegrew@dnr.state.oh.us</a>.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or <a href="mailto:ohio@fws.gov">ohio@fws.gov</a>.

Sincerely,

Patrice Ashfield

## Field Office Supervisor

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



## Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Fax: (614) 267-4764

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

June 6, 2022

Brian Miller AECOM 681 Andersen Drive, Suite 120 Pittsburgh, Pennsylvania 15220, USA

Re: 22-0504; Anguin-Brie 138kV Transmission Line

**Project:** The proposed project involves constructing approximately 1.3-miles of a new 138kv transmission line located between the Proposed Brie Station and the existing Anugin Substation.

Location: The proposed project is located in Jersey Township, Licking 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 project is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, 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 bat species 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. The DOW recommends tree 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.

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 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 the fawnsfoot (*Truncilla donaciformis*), a state threatened 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 the lake chubsucker (*Erimyzon sucetta*) a state threatened fish. The DOW recommends no in-water 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 this or other aquatic species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with dense, tall growths of aquatic or semiaquatic vegetation (particularly cattail, sedge, rushes, arrowheads, or sawgrass) interspersed with clumps of woody vegetation and open water. Nests are made from dried vegetation suspended .5 to 2.5 feet above the water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, 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 April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction

should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this type of 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 US 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.

https://ohiodnr.gov/static/documents/water/floodplains/Floodplain%20Administrator%20List.pdf

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

Mike Pettegrew Environmental Services Administrator

## Miller, Brian

From: Cortright, Kim < KCortright@lickingcounty.gov>

Tuesday, July 19, 2022 3:33 PM Sent:

To: Miller, Brian

Subject: [EXTERNAL] RE: Agricultural District Parcels - Jersey Township, Licking County

Brian, the list we provided you in May won't change until January 2023. Our enrollment for AG District mirrors the enrollment for the CAUV program. January 1, 2023 to March 3, 2003 (deadline for new enrollment is always prior to the 1<sup>st</sup> Monday in March). Sorry.

## Respectfully,

## Kim Cortright

Licking County Auditor's Office 20 S. 2<sup>nd</sup> Street Newark, Ohio 43055 Director of CAUV & Ag District kcortright@lcounty.com 740-670-5050

Fax: 740-670-5046

From: Miller, Brian <bri> Brian sprian.miller1@aecom.com>

Sent: Tuesday, July 19, 2022 2:47 PM

To: Cortright, Kim < KCortright@lickingcounty.gov>; Burfeind, Nicole < Nicole.Burfeind@aecom.com>

Subject: RE: Agricultural District Parcels - Jersey Township, Licking County

Hi Kim,

I wanted to follow up again to see if you can provide an updated list of agricultural districts within Jersey Township, Licking County Ohio. If you need anything else, please let me know.

Thanks,

### Brian J. Miller

Project Manager / Senior Ecologist

D +1-412-808-1844 M +1-412-667-9172 brian.miller1@aecom.com

#### **AECOM**

Foster Plaza 6 681 Andersen Drive, Suite 120 Pittsburgh, Pennsylvania 15220, USA T +1-412-503-4700

aecom.com

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From: Cortright, Kim < <a href="mailto:KCortright@lickingcounty.gov">KCortright@lickingcounty.gov</a>>

Sent: Tuesday, May 31, 2022 1:44 PM

To: Burfeind, Nicole < Nicole.Burfeind@aecom.com >

Subject: [EXTERNAL] RE: Agricultural District Parcels - Jersey Township, Licking County

Attached is the most recent report- per your request. You may compare for any changes since late March.

## Respectfully,

Kim Cortright

Licking County Auditor's Office 20 S. 2<sup>nd</sup> Street Newark, Ohio 43055 Director of CAUV & Ag District kcortright@lcounty.com

740-670-5050 Fax: 740-670-5046

From: Burfeind, Nicole < Nicole.Burfeind@aecom.com>

Sent: Tuesday, May 31, 2022 11:02 AM

To: Cortright, Kim < KCortright@lickingcounty.gov>

Subject: Agricultural District Parcels - Jersey Township, Licking County

Hello,

A co-worker of mine reached out in late March about a request for the parcel numbers for all of the agricultural districts in Jersey Township. Has there been any updates to the agricultural districts since that time? If there have been updates, could I request a new copy of the list of the parcel numbers of the agricultural districts?

## Thank you!

#### **Nicole Burfeind**

GIS Specialist II, IMS/GIS East D +1-610-234-0387 M +1-201-983-3439 nicole.burfeind@aecom.com

### Click here to connect with me on LinkedIn

#### **AECOM**

625 West Ridge Pike Suite E-100 Conshohocken, PA, 19425, USA aecom.com

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## **Appendix E Ecological Resources Inventory Report**

# ANGUIN-BRIE 138KV TRANSMISSION LINE PROJECT

# LICKING COUNTY, OHIO

## **ECOLOGICAL 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 #: 60683729

August 2022



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## **APPENDICES**

## Number

APPENDIX A	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)
APPENDIX B	OEPA Stream Data Forms / Delineated Features Photographs (combined per stream and shown in numerical order)
APPENDIX C	Pond and Habitat Photographic Record
APPENDIX D	Agency Correspondence
APPENDIX E	Desktop Assessment for Winter Bat Habitat

### 1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing installation of a new customer driven substation and associated transmission line routes as part of the Anguin-Brie Projects located in Licking County, Ohio. The purpose of this component is for the construction of a new 1.3 miles of a greenfield 138kV transmission line between the existing Anguin Station and proposed Brie Station known as the Anguin-Brie 138kV Transmission Line (Project). The Survey Area associated with this Report for the Project is located on the New Albany and Jersey, Ohio U.S. Geologic Survey 7.5' topographical quadrangles as displayed on Project Overview Map (**Figure 1**). Due to the active construction activities by others within the Project area, EMHT completed a wetland delineation and stream investigations within the Project area that were confirmed by the United States Army Corps of Engineers (USACE) via a Jurisdictional Determination (JD) in 2020. The EMHT delineation boundaries were confirmed during the site assessment and original boundaries provided on **Figure 3**.

The purpose of the field survey was to assess the presence of wetlands and other "waters of the United States" (WOTUS) that occur along the proposed Project alignment. Secondarily, land uses were also recorded to classify and characterize potential habitat for rare, threatened, and endangered species. This report will be used to assist AEP Ohio Transco's efforts to identify potential WOTUS and rare, threatened, and endangered species habitat present along the proposed Project alignment to avoid or minimize impacts during construction activities.

#### 2.0 METHODOLOGY

The field survey was conducted over a 200-foot survey area consisting of a 100-foot buffer on each side of the transmission centerline, 50-fott survey area centered on proposed access roads, and extent of temporary works pads composing a Project survey area of approximately 74.9 acres. Prior to conducting field surveys, digital U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) data, and U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), FEMA 100-year floodplain data (FEMA), and USGS 7.5-minute topographic maps were reviewed as an exercise to identify the occurrence and location of potential wetland areas.

Field survey activities included recording the physical boundaries of observed water features using submeter capable EOS Arrow Global Positioning System (GPS) units in conjunction with ArcCollector application on iPad tablets. The GPS data was imported into ArcMap Geographic Information System (GIS) software, where the data was reviewed, edited for accuracy, and compiled in a format suitable for transfer

and use by AEP Ohio Transco. Water features were delineated and assessed based upon the appropriate procedures detailed below. Land uses observed within the Project survey area was assigned a general classification based upon the principal land characteristics and vegetation cover of the location.

#### 2.1 WETLAND DELINEATION

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

During field survey activities AECOM utilized the routine on-site delineation method described in the 1987 Manual and Regional Supplements that consisted of a pedestrian site reconnaissance, including identifying the vegetation communities, soils identification, a geomorphologic assessment of hydrology, and notation of disturbance. If a wetland was identified, AECOM completed a USACE Wetland Determination Data form (USACE Data form) within each unique wetland habitat to serve as a representative of the wetland hydrology, vegetative community, and soil characteristics. Adjacent to each wetland complex, AECOM completed an additional USACE Data form as a representative of the upland community.

Additionally, USACE Data forms and representative photographs were also taken to represent upland communities where desktop review indicated the potential presence of an aquatic feature based on aerial imagery, two or less wetland criteria were observed, and/or an absence of an aquatic features was observed for areas mapped as an NWI and/or NHD feature.

### 2.1.1 WETLAND CLASSIFICATION

Wetlands identified in the field were classified based on the naming convention found in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin *et al*, 1979). The unique wetland habitats were classified as palustrine emergent (PEM), palustrine forested (PFO), palustrine unconsolidated bottom (PUB), palustrine scrub-shrub (PSS), or other classifications 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 having 30% or greater coverage is listed.



### 2.1.2 WETLAND ASSESSMENT

Each delineated wetland was assessed following the Ohio Environmental Protection Agency (OEPA) *Ohio Rapid Assessment Method for Wetlands v. 5.0* (ORAM) (Mack, 2001). Wetland assessments utilized the 10-page ORAM form, providing a final Category rating for each wetland.

### 2.2 STREAM ASSESSMENT

Streams were identified by the presence of a defined bed and bank, and evidence of an ordinary high-water mark (OHWM). The USACE defines OHWM as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE, 2005).

### 2.2.1 OEPA PRIMARY HEADWATER HABITAT ASSESSMENT

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, 2020). Streams associated with watershed area less than or equal to 1.0 mi2 (259ha), and a maximum depth of water pools equal to, or less than 15.75 inches were evaluated utilizing the HHEI methodology and all other streams assessed as QHEI. Flow regime (ephemeral, intermittent, perennial) was determined by the appropriate stream assessment score per OEPA manuals (OEPA, 2020) and by AECOM's professional judgment.

Streams assessed in the Project survey area 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; OEPA 2020).

#### 2.2.2 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: eligible, ineligible, and possibly eligible with additional field screening required. Impacts to streams within each watershed would then have eligibility for 401 Water Quality Certification determined by the watershed category. The three categories are defined as:

*Eligible*: Streams within the watershed are eligible for coverage under 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 D "Stream Eligibility Determination Process" of the OEPA Ohio State Water Quality Certification of the 2017 Nationwide Permit Reauthorization.

# 2.2.3 UPLAND DRAINAGE FEATURES

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).

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.

In addition, UDF's (including swales, ditches, and other erosional features) are generally not "waters of the U.S." except in certain circumstances, such as relocated streams.



# 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 area. AECOM submitted requests to Ohio Department of Natural Resources (ODNR) Office of Real Estate – Environmental Review Section and the United States Fish and Wildlife Service (USFWS) Ohio Ecological Services Field Office soliciting comments on the proposed Project. Responses were received in June and July 2022, respectively (**Appendix D**). 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 assessing potential impacts to rare, threatened, and endangered species. Land uses within the Project survey area was assigned a general classification based upon the principal land characteristics and vegetative cover as observed during the field surveys.

AECOM conducted a desktop assessment of the Project survey area and a quarter-mile buffer around it to identify potentially occurring winter bat hibernaculum that may be present near the Project which is located in **Appendix D**. This assessment was conducted by reviewing data on mining activity and karst geology from the ODNR Division of Mineral Resources and United States Geological Survey websites

#### 3.0 RESULTS

On May 10 and 11, 2022, AECOM ecologists walked the Project survey area to conduct the wetland delineation, stream assessment and habitat survey. Within the Project survey area, AECOM delineated nine wetlands, four streams, and three ponds within the 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, six soil series are mapped within the Project survey area (USDA NRCS 2021a and 2021b). Of these, one soil map unit is identified as hydric, comprising approximately 22.2% of the mapped unit areas. **Table 1** below provides a detailed overview of all soil series and soil map units present within the Project survey area. Soil map units located in the Project survey area and vicinity are shown on **Figure 2**.



TABLE 1 - SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE PROJECT SURVEY AREA

Soil Series	Map Unit Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Bennington	BeA	Bennington silt loam, 0 to 2 percent slopes	Drainageways, depressions	No	Condit 5% Pewamo, low carbonate till 3%
Bernington	BeB	Bennington silt loam, 2 to 6 percent slopes	Drainageways, depressions	No	Condit 3% Pewamo, low carbonate till 3%
	Cen1B1	Centerburg silt loam, 2 to 6 percent slopes	Drainageways, depressions	No	Condit 4% Marengo 3%
Centerburg	Cen1C2	Centerburg silt loam, 6 to 12 percent slopes	Drainageways, depressions	No	Condit 4%
Pewamo	Pe	Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes	Drainageways, depressions	Yes	Condit 9% Pewamo, low carbonate till 85%
Sloan	So	Sloan silt loam, Columbus Lowland, 0 to 2 percent slopes, frequently flooded	Backswamps on flood plains, meander scars on flood plains, flood- plain steps on flood plains	No	Sloan 85%

# 3.1.2 NATIONAL WETLAND INVENTORY MAP REVIEW

According to NWI data covering the Project location, the Project survey area contains three mapped NWI wetlands. The locations of NWI mapped wetlands in the Project vicinity are shown on **Figure 2**. A summary of NWI-mapped wetlands occurring in the Project survey area and their associated field identified resources is presented in **Table 2**.

TABLE 2 - NWI DISPOSITION SUMMARY TABLE WITHIN THE PROJECT SURVEY AREA

NWI Code	NWI Description	Related Field Inventoried Resource (Wetland ID/Stream ID)	Comments
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	S-CMS-002	Perennial Stream within wooded area and extends on both sides of the survey area
PEM1C	Palustrine, Emergent, Persistent, Seasonally Flooded	W-CMS-005	Field verified as PEM wetland complex

#### 3.1.3 DELINEATED WETLANDS

During the field survey, AECOM identified nine wetlands (five PEM, two PFO, one PEM/PFO, and one PFO/PUB complexes). Of these nine wetlands, five wetlands were classified as Category 1 and four wetlands as Category 2. Review of the EMHT wetlands, four AECOM wetlands were delineated within areas designated by EMHT. AECOM delineated wetland, W-CMS-005 (PFO), W-CMS-006 (PFO), W-CMS-007 (PFO) are represented by the EMHT Wetland Why 2 F, A, and C respectively. No changes in the boundaries of the delineated features were identified. Furthermore, AECOM delineated two wetlands, W-CMS-005 (PEM) and W-CMS-008 (PFO/PUB), within an EMHT preservation area. The boundaries of both EMHT and AECOM delineation boundaries are provided on **Figure 3**.

AECOM has given each wetland within the Project survey area a provisional determination of jurisdictional (non-isolated, i.e., WOTUS). Final jurisdictional status can only be determined by the USACE, and AECOM assessments are provisional. The locations and approximate extent of the wetlands identified within the Project survey area is shown on **Figure 3**. Details for each delineated wetland in the survey area are provided in **Table 3**. Completed USACE data forms, ORAM forms, and photographs of each wetland are provided in **Appendix A**.



TABLE 3 – SUMMARY OF DELINEATED WETLANDS WITHIN PROJECT SURVEY AREA

	Loc	ation			Delineated	C	RAM	Nearest	Existing Structur	Proposed	Structure	Proposed	l Impacts
Wetland ID	Latitude	Longitude	Isolated?	Habitat Type	Area (acre)	Score	Category	Structure # (Existing / Proposed)	e # in Wetland	Structure # in Wetland	Installation Method	Temporary Matting Area (acre)	Permanent Impact Area (acre)
W-CMS-001	40.065766	-82.765490	No	PEM	0.245	15.0	1	(Anguin 138kV Tline) Proposed Structure 1	None	None	TBD	N/A	N/A
W-CMS-002	40.065123	-82.765891	No	PEM	0.616	18.0	1	(Anguin 138kV Tline) Proposed Structure 2	None	None	TBD	N/A	N/A
W-CMS-003	40.061245	-82.756309	No	PEM	0.316	21.0	1	(Anguin 138kV Tline) Proposed Structure 7	None	Structure 7	TBD	0.043	<0.01
W-CMS-004	40.057441	-82.755511	No	PEM	0.105	12.0	1	(Anguin 138kV Tline) Proposed Structure 10 Pull Site Only	None	None	TBD	N/A	N/A
W-CMS-005	40.057542	-82.751661	Yes	PEM	0.142	50.0	2	(Anguin 138kV Tline) Proposed	None	None	TBD	N/A	N/A
	40.057350	-82.751703		PFO	0.022		_	Structure 11 to	None	None	TBD	N/A	N/A
W-CMS-006	40.057040	-82.751804	Yes	PFO	0.115	58.5	2	(Anguin 138kV Tline) Proposed Structure 11 to 12	None	None	TBD	N/A	N/A
W-CMS-007	40.057027	-82.750936	Yes	PFO	0.118	49.0	2	(Anguin 138kV Tline) Proposed Structure 11 to 12	None	None	TBD	N/A	N/A
W-CMS-008	40.058298	-82.745627	No	PFO	0.186	55	2	Anguin 138kV Tline Proposed	None	None	TBD	N/A	N/A
VV-CIVIS-008	40.058245	-82.745578	No	PUB	0.048	ວວ	2	Structure 13 A/B	None	None	TBD	N/A	N/A
W-CMS-011	40.057437	-82.749860	Yes	PEM	0.053	13.0	1	(Anguin 138kV Tline) Proposed Structure 12	None	None	TBD	N/A	N/A



	Loc	ation		Habitat	Delineated	C	RAM	Nearest Structure #	Existing Structur	Proposed Structure	Structure	Proposed	l Impacts
Wetland ID	Latitude	Longitude	Isolated?	Туре	Area (acre)	Score	Category	(Existing / Proposed)	e # in Wetland	# in Wetland	Installation Method	Temporary Matting Area (acre)	Permanent Impact Area (acre)
P-CMS-001	40.064457	-82.764882	*	*	3.300	-	-	(Anguin 138kV Tline) Proposed Structure 2	None	None	TBD	N/A	N/A
P-CMS-002	40.060863	-82.756054	*	*	0.091	-	-	(Anguin 138kV Tline) Proposed Structure 7	None	None	TBD	N/A	N/A
P-CMS-003	40.060313	-82.754153	*	*	0.666	1	-	(Anguin 138kV Tline) Proposed Structure 8	None	None	TBD	N/A	N/A
Total:					6.024							0.043	<0.01

<sup>\*</sup> Feature is a manmade stormwater retention pond and not eligible for scoring under ORAM



# 3.2 STREAM DELINEATION

During the field survey, AECOM delineated four streams (two perennial and two intermittent) within the Project survey area. HHEI evaluations were conducted on four streams that were classified as Class 1 PHW, Modified Class 1 PHW, or Modified Class 2 PHW. The one QHEI identified stream was classified as poor and none of the identified streams had an existing OEPA Aquatic Life Use Designation.

AECOM has provided a provisional determination that all delineated streams within the Project survey area appear to be jurisdictional (i.e., WOTUS), based on their observed or presumed confluence with downstream waters. Final jurisdictional status can only be determined by the USACE and AECOM assessments are provisional. A summary of the delineated features is provided in **Table 4**. Stream data forms and photographs of each delineated stream resource are provided in **Appendix B**.

#### 3.2.1 OEPA STREAM ELIGIBILITY

OEPA stream eligibility for 401 Water Quality Certification mapping was reviewed for all of the delineated streams. The Project occurs across two watersheds, designated by 401 WQC eligibility, as listed in **Table 5**. These watersheds are listed as "eligible" and "possibly eligible". OEPA stream eligibility mapping for the Project vicinity, is provided on **Figure 4**.

#### 3.3 FEMA 100 YEAR FLOODPLAINS

Mapped FEMA designated 100-year floodplains and floodways are displayed on **Figure 2** and no regulated FEMA 100-year floodplains and/or floodways are located within the Project area.



# TABLE 4 - SUMMARY OF DELINEATED STREAMS WITHIN THE PROJECT SURVEY AREA

Stream ID	Location Stream Stream		tream Stream Name		Bankfull	OHWM		Fiel	d Evaluation	Ohio EPA 401	Stream	Proposed	Impacts	
Stream ID	Latitude	Longitude	Туре	Stream Name	Length (feet)	Width (feet) (feet)		Method	Score	Classification / Rating / OAC Designation	Eligibility	Crossing?	Fill Type	Length (LF)
S-CMS-001	40.065798	-82.764697	Intermittent	UNT to Blacklick Creek	21	2.5	2	HHEI	15	Class 1 PHW	Eligible	No	None	0
S-CMS-002	40.065055	-82.763003	Perennial	UNT to Blacklick Creek	2951	22	20	QHEI	42	Poor	Eligible	No	None	0
S-CMS-003	40.061247	-82.756826	Perennial	UNT to Blacklick Creek	236	3	3	HHEI	28	Modified Class 1 PHW	Eligible	Yes - Air Bridge	Temporary	<0.01
S-CMS-004	40.057691	-82.745594	Intermittent	UNT to South Fork Licking River	349	3.5	3	HHEI	45	Class 2 PHW	Eligible	No	None	0
Total:					3,557									<0.01



TABLE 5- SUMMARY OF WATERSHED 401 WQC ELIGIBILITY WITHIN THE PROJECT SURVEY AREA

HUC-12	Watershed	401 WQC Eligibility	Number of Stream Assessments
050400060402	Headwaters South Fork Licking River	Eligible	1
050400060401	Headwaters Blacklick Creek	Possibly Eligible	3
		Total	4

### 3.4 PONDS

Three ponds were observed within the Project survey area. Photographs of the delineated ponds are provided in **Appendix C**.

#### 1.1 UPLAND DRAINAGE FEATURES WITHIN THE PROJECT SURVEY AREA

Two upland drainage features (UDF-CMS-001 and UDF-CMS-003) were identified as stormwater channel of Anguin Station and a roadside ditch along the west side of Beech Road, respectively. Based on the site investigation, both UDF lacked a significant nexus to a jurisdictional WOTUS. Photographs of the upland drainage feature is provided in **Appendix B**.

#### 3.5 VEGETATIVE COMMUNITIES WITHIN THE PROJECT SURVEY AREA

AECOM ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys. A variety of woody and herbaceous lands, as described in **Table 6**, below, are present within the Project survey area, including old field, agricultural land, successional hardwood woodlands, pasture/hay fields, residential landscaped areas, stream/wetland areas, and urban areas. Habitat descriptions applicable to the Project are provided below. Vegetative communities are depicted visually on aerial photography in **Figure 5**.



TABLE 6- VEGETATIVE COMMUNITIES WITHIN THE PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage Within the Project Survey Area	Approximate Percentage Within the Project Survey Area
Agricultural	Agricultural lands being utilized for row-crop production and associated activities, typically devoid of vegetation outside of the target crop and opportunistic/invasive species.	2.37	3.2
Developed Open Space	Developed open space 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.	22.36	29.9
Forested	Successional mixed hardwood woodlands are present along the Project survey area. Woody species dominating these areas ranged between 2-6" DBH and included red elm (Ulmus rubra), white ash (Fraxinus americana), black maple (Acer negundo), black cherry (Prunus serotina), and quaking aspen (Populus tremuloides). The dominant shrub-layer species included Morrow's honeysuckle (Lonicera morrowii), black cherry (Prunus serotina), multiflora rose (Rosa multiflora) and blackberry (Rubus occidentalis).	4.86	6.5
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey area 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 survey areas and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs.	3.68	4.9
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.	36.51	48.7
Wetlands/Streams	Streams and wetlands were observed both within and beyond the survey area for the Project.	5.12	6.8
Totals:		74.9	100%

# 3.6 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

# Protected Species Agency Consultation -

AECOM conducted a rare, threatened, and endangered species review for areas within the Project survey area. A summary of the agency coordination is provided below. Correspondence letters from the USFWS and ODNR for the Anguin-Brie 138kV transmission line project is included as **Appendix D**. **Table 7** provides



a list of species of concern identified by the agencies as potentially occurring within the vicinity of the Project. Photographs of the habitat within the Project area is provided as **Appendix C**.



TABLE 7
ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts
					Mammals		
Indiana Bat ( <i>Myoti</i> s 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 (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.	Summer habitat Yes - Within the Project survey area, areas of young successional forest were identified which appear to be potentially suitable summer roosting and foraging habitat.  Hibernaculum(a) No - No Mines openings and/or known caves are located within 0.25 miles of Project area and USFWS did not identify known hibernacula within 5- miles of the Project. Furthermore, field evaluations did not identify any potential hibernaculum(a) within the Project area. See Appendix E.	Summer Tree Clearing April 1 – September 30	The USFWS and ODNR stated that the entire state of Ohio is within range of this species. Therefore, the USFWS and ODNR recommend that if the site should contain trees ≥ 3-inch diameter at breast height (DBH), trees should be saved, whenever possible. If any caves or abandoned mines may be disturbed, further coordination would be required with both ODNR and USFWS. If no caves or abandoned mines are present and trees ≥ 3-inch DBH only occur, USFWS and ODNR recommend the clearing of trees between October 1 and March 31 to avoid adverse effect to this species.  If implementation of seasonal tree clearing is not possible, the USFWS and ODNR recommend presence/absences surveys be conducted between June 1 and August 15, prior to any cutting. In accordance with the 2022 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2022 Joint Guidance) (copy of guidance provided as Attachment D) and both the USFWS and ODNR responses, limited tree cutting in summer may be permitted after consultation with the USWFS and ODNR but clearing trees with the following characteristics should be avoided unless they pose a hazard; dead or live trees of any size with loose, shaggy bark; crevices, holes or cavities; clusters of dead leaves; live trees of any species with diameter at breast height (DBH) greater than 20-inches.  ODNR also recommends a desktop habitat assessment be completed to determine potential hibernaculum(a) are present within Project area. If desktop habitat assessment finds hibernacula within 0.25 miles, further coordination with the ODNR is required for additional guidance. If potential and/or known hibernaculum is found, the ODNR 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 ODNR. If no tree clearing cutting or subsurface impacts to a hibernaculum are proposed, the Project is not likely to impact these species.  Furthermore, 2022 Joint Guidance prov	Summer habitat Potential summer roosting habitat is present within the Project area and seasonal tree clearing between October 1 and March 31 is recommended. If seasonal tree clearing cannot be completed, additional coordination including roost/emergence surveys, mist net surveys, and/or other presence absence surveys may be warranted to be completed between June 1 and August 15.  Hibernaculum(a) No potential hibernaculum(a) is present within the Project area and no further coordination is warranted.



TABLE 7
ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts
Northern Long-eared Bat ( <i>Myotis septentrionalis</i> )	Threatened	Threatened	Suitable summer habitat for northern longeared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel, and may also include some adjacent and interspersed nonforested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forest and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3-inches dbh that have any exfoliating bark, cracks, crevices, hollows, and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. 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 humanmade structures, such as buildings, barns, bridges, and bat houses; therefore, these structure should also be considered potential summer habitat. In the winter, northern long-eared bats hibernate in caves and abandoned mines.	Summer habitat Yes - Within the Project survey area, areas of young successional forest were identified which appear to be potentially suitable summer roosting and foraging habitat.  ODNR commented known records for species within Project area.  Hibernaculum(a) No – No Mines openings and/or known caves are located within 0.25 miles of Project area. Furthermore, field evaluations did not identify any potential hibernaculum(a) within the Project area. See Appendix E.	Summer Tree Clearing April 1 – September 30	The USFWS and ODNR stated that the entire state of Ohio is within range of this species. Therefore, the USFWS and ODNR recommend that if the site should contain trees ≥ 3-inch diameter at breast height (DBH), trees should be saved, whenever possible. If any caves or abandoned mines may be disturbed, further coordination is requested by both the USFWS and ODNR. If no caves or abandoned mines are present and trees ≥ 3-inch DBH only occur, USFWS and ODNR. If no caves or abandoned mines are present and trees ≥ 3-inch DBH only occur, USFWS and ODNR. If no caves or abandoned trees between October 1 and March 31 to avoid adverse effect to this species.  The ODNR commented that the Project is within the vicinity of known records of this species. Therefore, summer tree cutting is not recommended and additional summer surveys would not constitute a presence/absence in the area. However, limited tree cutting in summer may be permitted after consultation with the ODNR but clearing trees with the following characteristics should be avoided unless they pose a hazard; dead or live trees of any size with loose, shaggy bark; crevices, holes or cavities; clusters of dead leaves; live trees of any species with diameter at breast height (DBH) greater than 20-inches.  ODNR also recommends a desktop habitat assessment be completed to determine potential hibernaculum(a) are present within Project area. If desktop habitat assessment finds hibernacula within 0.25 miles, further coordination with the ODNR 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 ODNR. If no tree clearing cutting or subsurface impacts to a hibernaculum are proposed, the Project is not likely to impact these species.  Furthermore, 2022 Joint Guidance provides additional agency guidance regarding tree clearing activities and states if the Project does not contain known bat hibernaculum(a) and the desktop habitat assess	recommended. If summer tree cutting is required, additional summer surveys would not constitute presence/absence due to know presence of this species. Additional consultation with the ODNR for permission for limited summer tree cutting is recommended and



TABLE 7
ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts
Little brown bat ( <i>Myotis lucifugus</i> )	Endangered	NA	The little brown bat shares similar habitat requirements as other Myotis species including the Indiana bat and northern longeared bat. This species may roost in trees, attics, or other man-made structures during the summer season. In winter, they may hibernate in caves, mines, or man-made structures with appropriate temperature regimes.	Summer habitat Yes - Within the Project survey area, areas of young successional forest were identified which appear to be potentially suitable summer roosting and foraging habitat.  ODNR commented known records for species within Project area.  Hibernaculum(a) No – No Mines openings and/or known caves are located within 0.25 miles of Project area. Furthermore, field evaluations did not identify any potential hibernaculum(a) within the Project area. See Appendix E.	Summer Tree Clearing April 1 – September 30	The ODNR stated that the entire state of Ohio is within range of this species. Therefore, the ODNR recommends that if the site should contain trees ≥ 3-inch diameter at breast height (DBH), trees should be saved, whenever possible. If any caves or abandoned mines may be disturbed, further coordination is requested by the ODNR. If no caves or abandoned mines are present and trees ≥ 3-inch DBH only occur, ODNR recommend the clearing of trees between October 1 and March 31 to avoid adverse effect to this species.  If implementation of seasonal tree clearing is not possible, the ODNR recommends presence/absences surveys be conducted between June 1 and August 15, prior to any cutting. In accordance with the 2022 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2022 Joint Guidance) (copy of guidance provided as Attachment D) and ODNR response, limited tree cutting in summer may be permitted after consultation with the ODNR but clearing trees with the following characteristics should be avoided unless they pose a hazard; dead or live trees of any size with loose, shaggy bark; crevices, holes or cavities; clusters of dead leaves; live trees of any species with diameter at breast height (DBH) greater than 20-inches.  ODNR also recommends a desktop habitat assessment be completed to determine potential hibernaculum(a) are present within Project area. If desktop habitat assessment finds hibernacula within 0.25 miles, further coordination with the ODNR is required for additional guidance. If potential and/or known hibernaculum is found, the ODNR 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 ODNR. If no tree clearing cutting or subsurface impacts to a hibernaculum are proposed, the Project is not likely to impact these species.  Furthermore, 2022 Joint Guidance provides additional agency guidance regarding tree clearing activities and states if the Pr	Summer habitat Potential summer roosting habitat is present within the Project area and seasonal tree clearing between October 1 and March 31 is recommended. If seasonal tree clearing cannot be completed, additional coordination including roost/emergence surveys, mist net surveys, and/or other presence absence surveys may be warranted to be completed between June 1 and August 15.  Hibernaculum(a) No potential hibernaculum(a) is present within the Project area and no further coordination is warranted.



TABLE 7
ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts
Tricolored bat (Perimyotis subflavus)	Endangered	NA	The tricolored bat primarily roosts in trees during the summer months. During winter, this species hibernates in humid mines, caves, and occasionally man-made structures.	Summer habitat Yes - Within the Project survey area, areas of young successional forest were identified which appear to be potentially suitable summer roosting and foraging habitat.  ODNR commented known records for species within Project area.  Hibernaculum(a) No - No Mines openings and/or known caves are located within 0.25 miles of Project area. Furthermore, field evaluations did not identify any potential hibernaculum(a) within the Project area. See Appendix E.	Summer Tree Clearing April 1 – September 30	The entire state of Ohio is within range of this species. Therefore, the ODNR recommends that if the site should contain trees ≥ 3-inch diameter at breast height (DBH), trees should be saved, whenever possible. If any caves or abandoned mines may be disturbed, further coordination is requested by the ODNR. If no caves or abandoned mines are present and trees ≥ 3-inch DBH only occur, the ODNR recommend the clearing of trees between October 1 and March 31 in order to avoid adverse effect to this species.  If implementation of seasonal tree clearing is not possible, the ODNR recommends presence/absences surveys be conducted between June 1 and August 15, prior to any cutting. In accordance with the 2022 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2022 Joint Guidance) (copy of guidance provided as Attachment D) and ODNR response, limited tree cutting in summer may be permitted after consultation with the ODNR but clearing trees with the following characteristics should be avoided unless they pose a hazard; dead or live trees of any size with loose, shaggy bark; crevices, holes or cavities; clusters of dead leaves; live trees of any species with diameter at breast height (DBH) greater than 20-inches.  ODNR also recommends a desktop habitat assessment be completed to determine potential hibernaculum(a) are present within Project area. If desktop habitat assessment finds hibernacula within 0.25 miles, further coordination with the ODNR is required for additional guidance. If potential and/or known hibernaculum is found, the ODNR 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 ODNR. If no tree clearing cutting or subsurface impacts to a hibernaculum are proposed, the Project is not likely to impact these species.  Furthermore, 2022 Joint Guidance provides additional agency guidance regarding tree clearing activities and states if the Project d	Summer habitat Potential summer roosting habitat is present within the Project area and seasonal tree clearing between October 1 and March 31 is recommended. If seasonal tree clearing cannot be completed, additional coordination including roost/emergence surveys, mist net surveys, and/or other presence absence surveys may be warranted to be completed between June 1 and August 15.  Hibernaculum(a) No potential hibernaculum(a) is present within the Project area and no further coordination is warranted.
					Mussels		
Fawnsfoot ( <i>Truncilla</i> donaciformis)	Threatened	None	This species can be found in medium to large rivers at depths between less than three feet to 18 feet. It prefers sand or mud substrates. It is also adapted to lakes and embankments.	No - potentially suitable habitat was observed within the Project survey area	N/A Fish	ODNR stated that 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 these species.	No potentially suitable habitat was observed within the Project survey area. No impacts to mussel species and their habitat are anticipated.

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TABLE 7
ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts
Lake chubsucker (Erimyzon sucetta)	Threatened	None	This species is found mainly in lakes, ponds, swamps, and streams.	Yes, streams and ponds are present, but no-in water work is anticipated.	N/A	The DOW recommends no in water 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 this or other aquatic species.	No work in-stream or water is proposed; no further coordination required.
					Birds		
Upland Sandpiper ( <i>Bartramia longicauda</i> )	Endangered	None	This species utilizes dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and sometimes the grassy extensions of airports.	No potentially suitable habitat was observed for this species	N/A	ODNR stated that if this type of habitat will be impacted, construction should be avoided in the habitat during the species' nesting period of April 15 through July 31.	No potentially suitable habitat was observed within the Project survey area (Figure 5).
Least bittern (Ixobrychus exilis)	Threatened	None	Dense emergent wetlands with dense, tall growths of aquatic or semi aquatic vegetation interspersed with clumps of woody vegetation and open water.	No potentially suitable habitat was observed for this species	N/A	ODNR stated that if this type of habitat will be impacted, construction should be avoided in the habitat during the species' nesting period of May 1 through July 31.	No potentially suitable habitat was observed within the Project survey area (Figure 5).
Northern harrier ( <i>Circus</i> hudsonius)	Endangered	None	This species hunts over grasslands and nests can be found in large marshes and grasslands.	No potentially suitable habitat was observed for this species	N/A	ODNR stated that if this type of habitat will be impacted, construction should be avoided in the habitat during the species' nesting period of April 15 to July 31.	No potentially suitable habitat was observed within the Project survey area (Figure 5).



### **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 June 6, 2022, the ODNR Office of Real Estate Environmental Review Section replied to a request for records of protected species within an extended area around the Project site. The Ohio Natural Heritage Database (ONHD) review found no records of state-protected species or state protected resource areas at or within a one-mile radius of the Project survey area.

The ODNR Division of Wildlife (DOW) recommended that impacts to streams, wetlands, and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation. In addition, the DOW listed nine state-listed species within range of the Project survey area, including:

- Four mammals: Indiana bat, northern long-eared bat, little brown bat and tricolored bat;
- One mussel: fawnsfoot;
- One fish: lake chubsucker, and
- Three birds: northern harrier, upland sandpiper and least bittern.

Potentially suitable summer habitat for the four bats were identified in the Project survey area and one of the four listed bat species, northern long-eared bat, was identified by the ODNR as a known presence within the Project survey area. Therefore, the ODNR recommends tree clearing activities to occur between October 1 and March 31. If trees must be cut during the summer months, the ODNR recommends that a mist net survey could be completed for Indiana bat, little brown bat, and the tricolored bat between June 1 and August 15 to confirm presence/absence. However, additional summer surveys would not constitute presence/absence within the Project area for the northern long-eared bat. Therefore, limited tree clearing activities could be permitted upon completion and coordination of results of emergent and/or roost tree surveys with the ODNR. Regarding potential hibernaculum(a) within the Project area, a desktop hibernaculum(a) review was completed in accordance with 2022 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2022 Joint Guidance) and no known karst, mines, and/or caves were identified within 0.25 miles of the Project survey area during the desktop analysis and no caves or mines were identified during the ecological survey.

The ODNR noted that the Project is within the range of the northern harrier, least bittern and upland sand piper; however, AECOM ecologist and approved avian specialist concluded an absence of these species' habitats within the Project survey area. Open grasslands and wet meadow marshes of at minimum of approximately 2

acres are considered as nesting habitat for the Northern Harrier and the Project survey area is mostly actively or recently disturbed area with fragmented grasslands. The fragmentation of habitat severely affects the habitat suitability of northern harrier as the patches may be too small, isolated, and/or too influenced by edge effects to maintain a viable population. Similarly, the least bittern requires undisturbed wetland habitats with dense vegetation within open water between 1 to 12 acres in size. Even though several ponds and wetlands were identified within the Project survey area, the ponds are manmade as well as wetlands lacked the vegetation or inundation that provides cover for the species nesting habitat. Lastly, the upland sandpiper requires at a minimum of 20-acres in size of dry grasslands, pastures, hayfields, airports, or vegetation of shorter vegetation height for potential nesting habitat and the Project survey area lack the available landscape due to the amount of urbanization within the area to provide this suitable habitat. As a result, an absence of potential nesting habitat for these bird species was identified within the Project survey area; therefore, the Project is not likely to impact these species.

Due to the absence of in-stream work proposed, the Project is not likely to impact either lake chubsucker or fawnsfoot.

#### **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 area. The USFWS responded on July 5, 2022, noting that the Project lies within the range of the federally endangered Indiana bat and the federally threatened northern long-eared bat. USFWS recommends that trees ≥3 inches dbh, be saved wherever possible. If no caves or abandoned mines are present and trees ≥3 inches cannot be avoided, USFWS recommends that tree removal occur between October 1 and March 31 to avoid adverse effects to Indiana bats and northern long-eared bats during the brood-rearing months.

#### 4.0 SUMMARY

The ecological survey of the Project survey area identified a total of nine wetlands, four streams and three ponds. The wetlands within the Project survey area included five PEM, two PFO, one PFO/PUB complex, and one PEM/PFO complex. Five wetlands were identified as Category 1 wetlands and four wetlands were identified as Category 2 wetlands. All wetlands have been provisionally classified as jurisdictional WOTUS. Four of the delineated wetlands were previously identified by EMHT and boundaries of both delineations are provided on **Figure 3**. The four streams identified within the Project survey area include 2 intermittent streams and 2 perennial streams. HHEI assessments were conducted on three streams, while one stream was assessed using the QHEI methodology. AECOM has preliminary determined that the assessed streams within the Project survey corridor appear to be jurisdictional (i.e., WOTUS).

Of nine species identified within range of the Project survey area, four bat species were identified as displaying summer roosting habitat and no hibernacula was identified within 0.25 miles of the Project survey area. Due to presence of summer roosting habitat for these bat species, it was recommended by the ODNR to complete seasonal tree clearing activities between October 1<sup>st</sup> and March 31<sup>st</sup>. If seasonal tree clearing cannot be completed, mist net surveys could be completed for Indiana bat, little brown bat, and/or tricolored bat between April 1 to September 30. However, northern long eared bat is known to occur within the Project area and additional mist net surveys would not constitute presence/absence for this species. Therefore, limited summer tree cutting inside of the know buffer for this species could be permitted by further coordinating results of emergent and/or roost surveys with the ODNR.

Based on general observations during the ecology survey, part of the Project survey area contained potential summer habitat for the various bat species. Additional mist net surveys are required for summer tree clearing. Additional coordination with the ODNR will be required for summer tree clearing to occur. USFWS and ODNR 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 adverse effects to Indiana bats and northern long-eared bats during the brood-rearing months.

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.

The information contained in this wetland delineation report is for a survey 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.

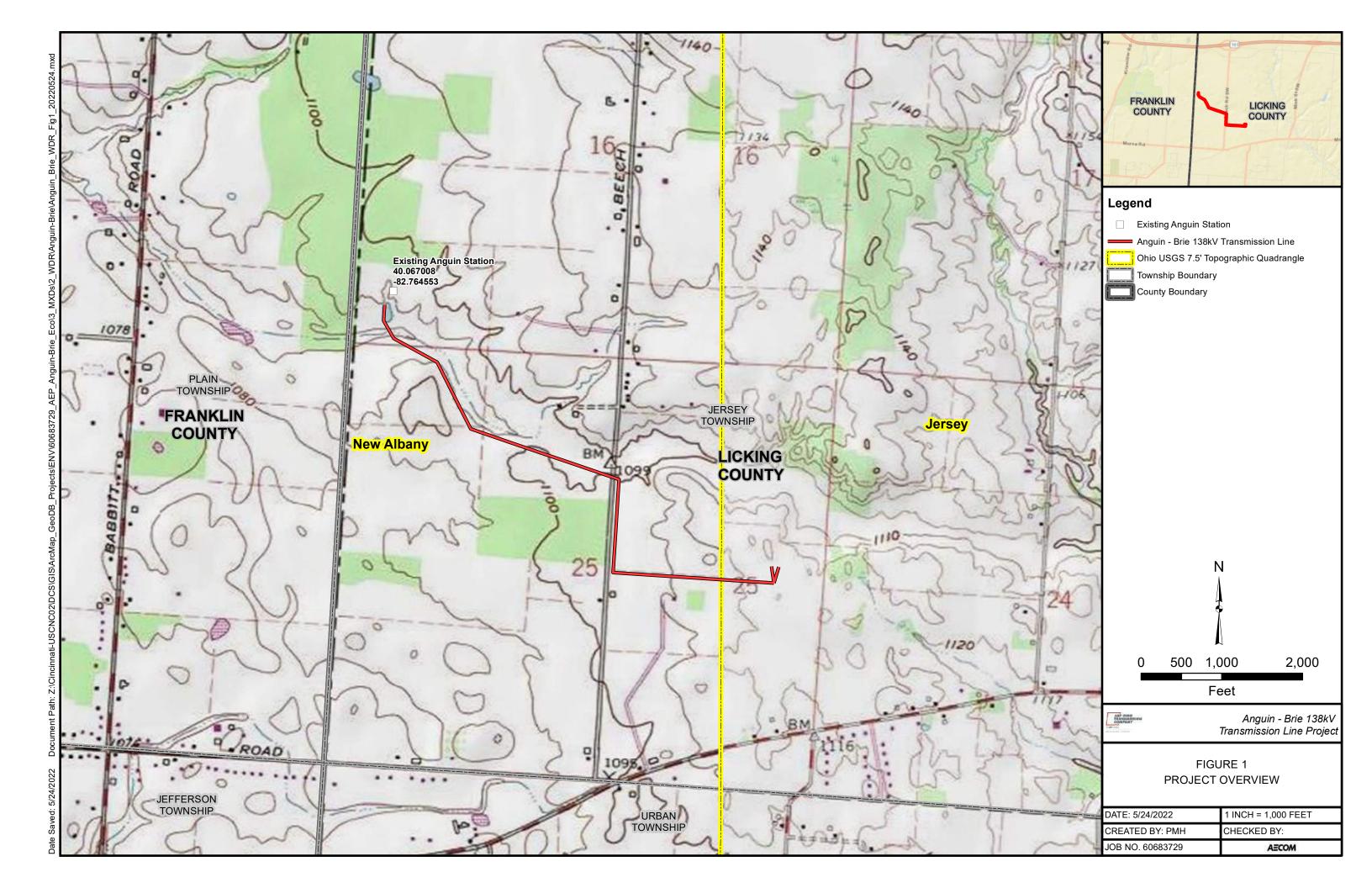
The field survey results presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which AECOM is unaware and has not had the opportunity to review. Changes in the condition of a property may occur with time due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

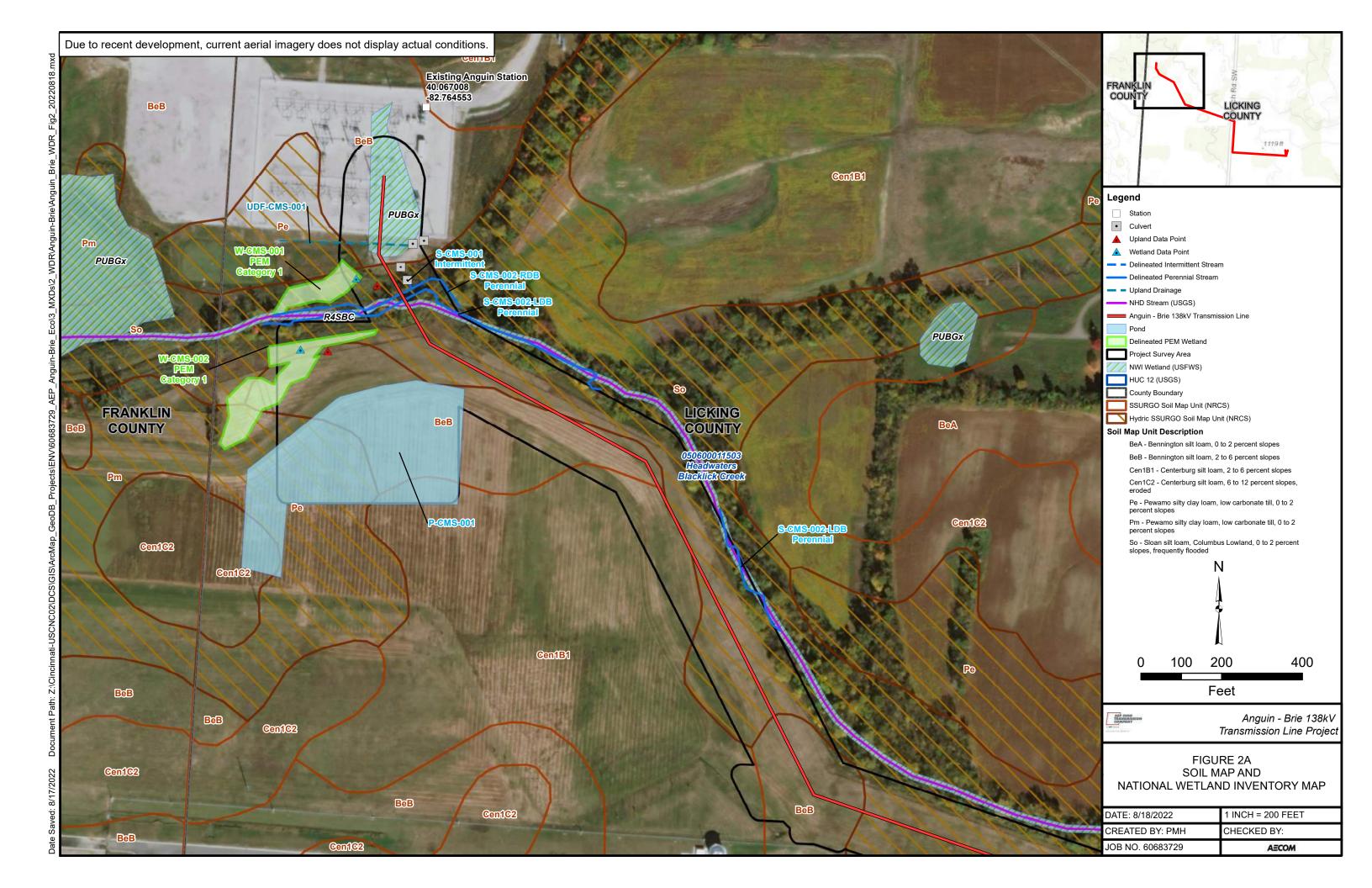
# 5.0 REFERENCES

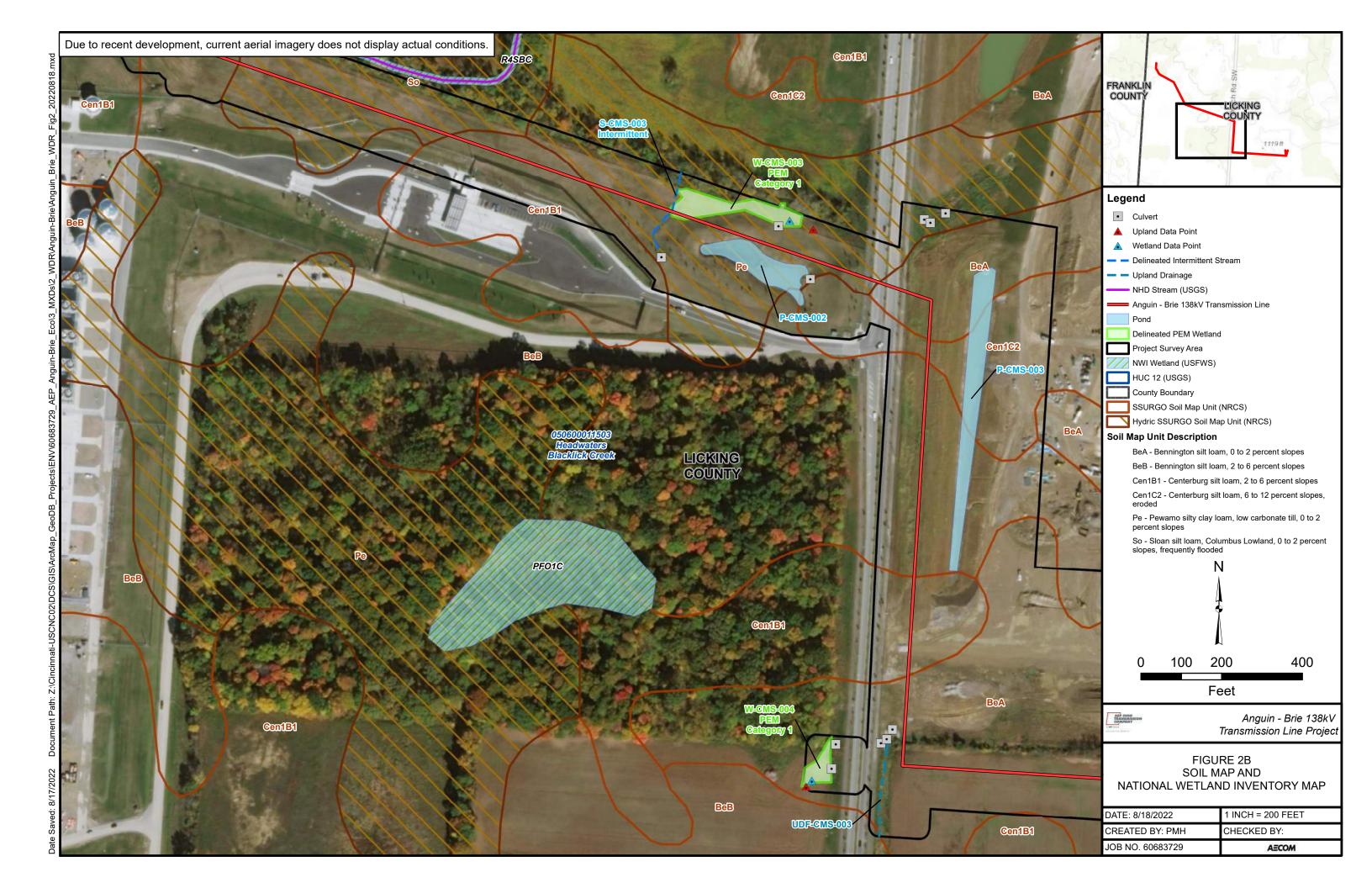
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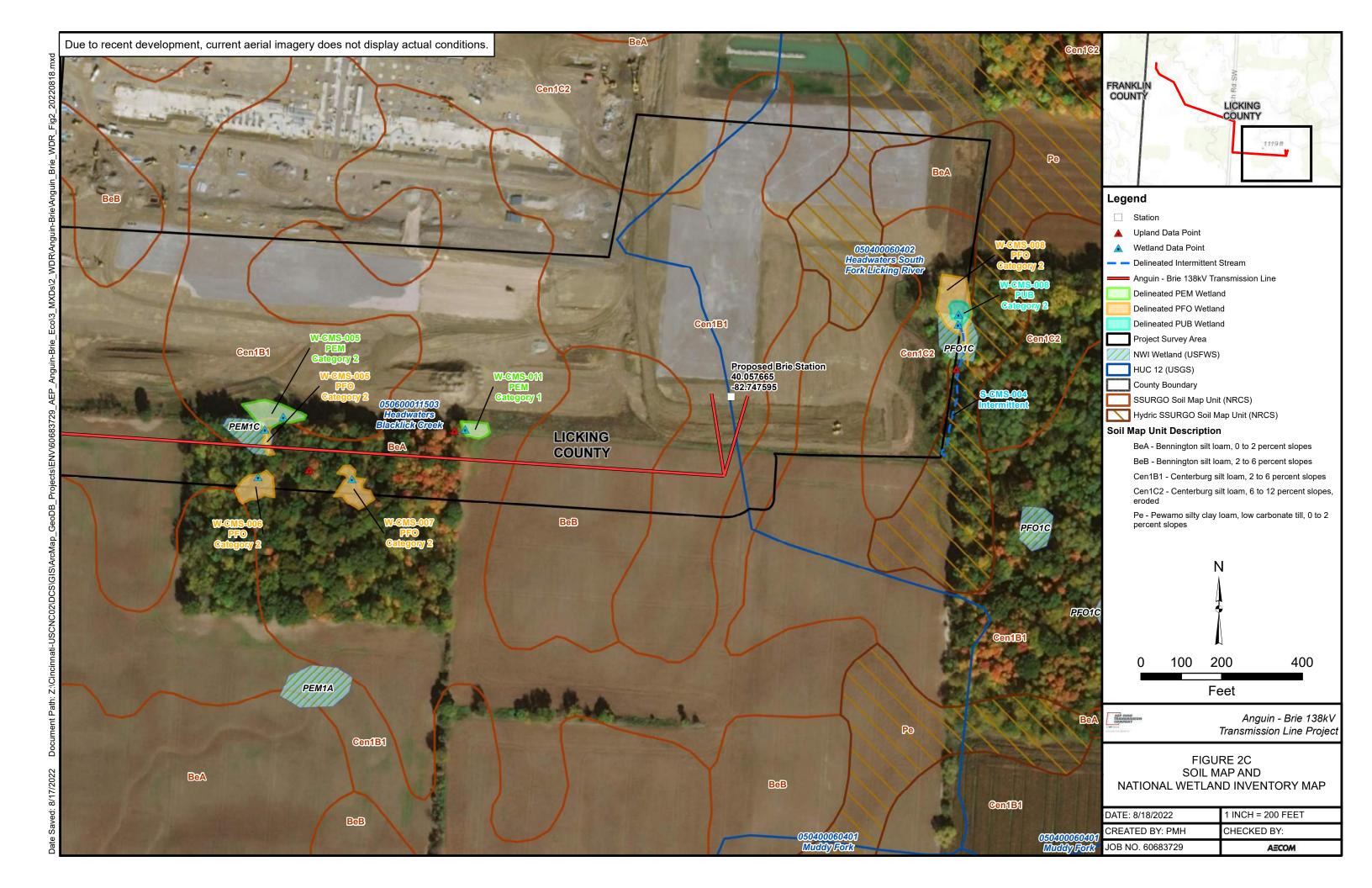


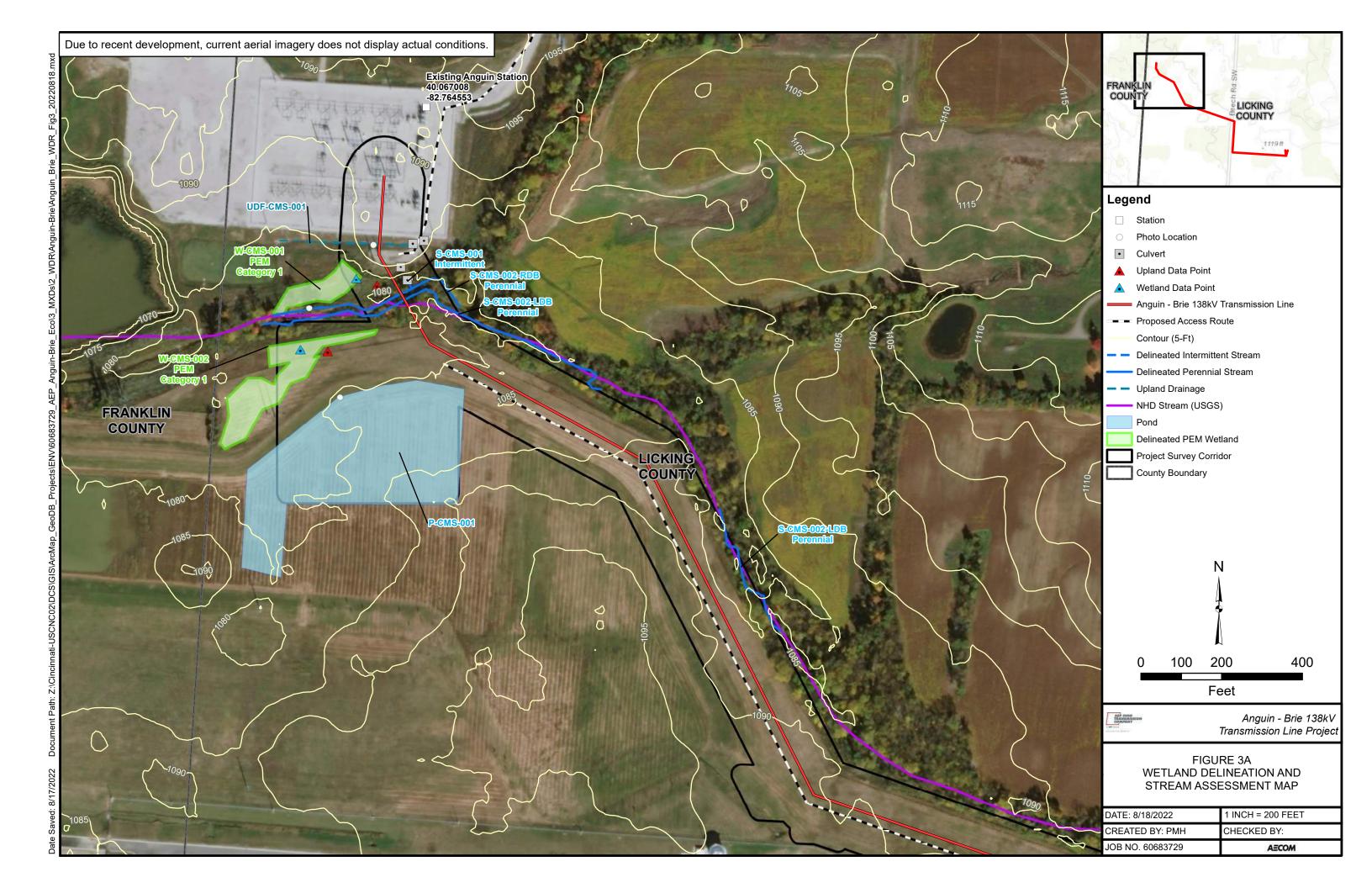
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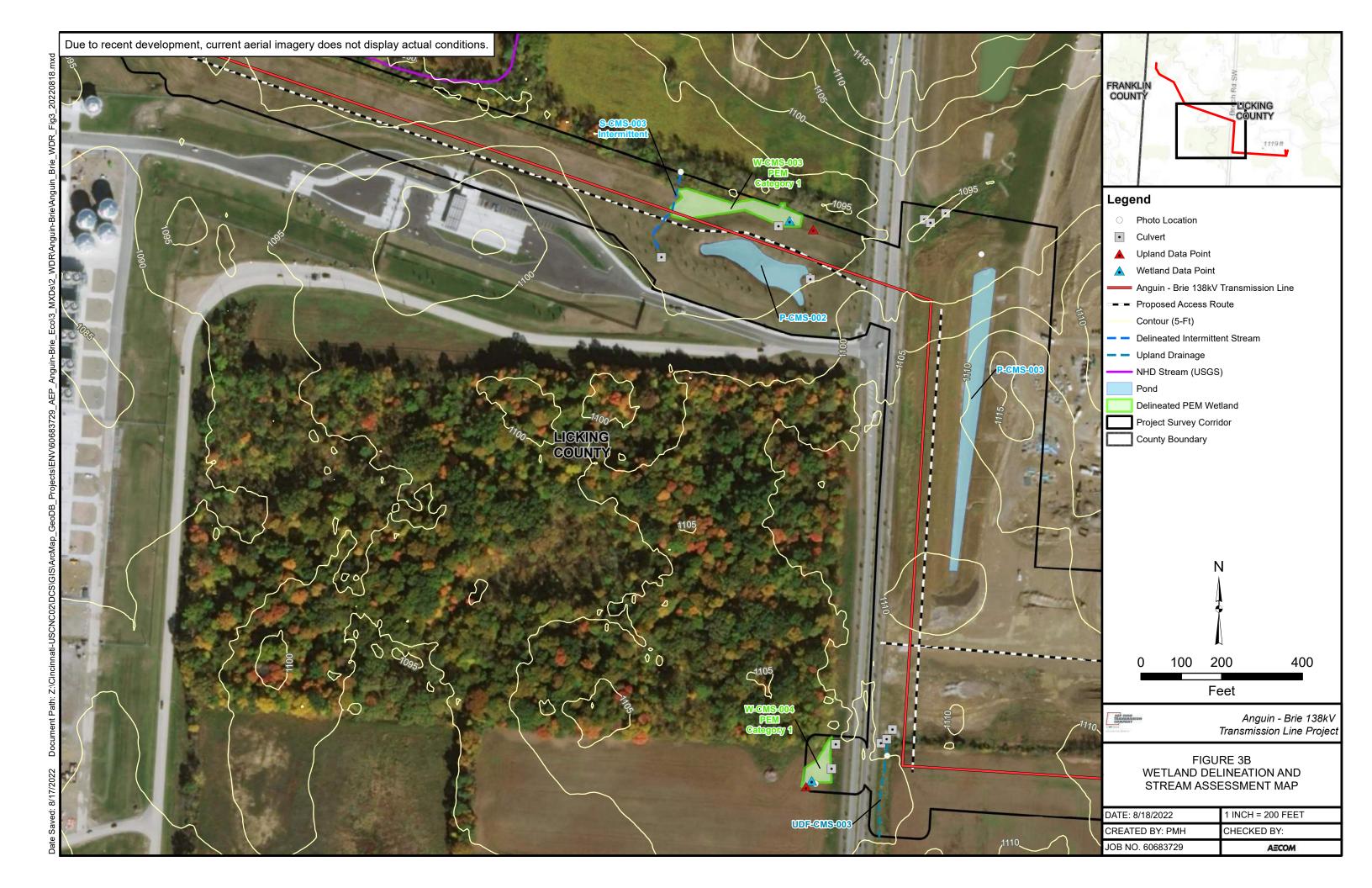


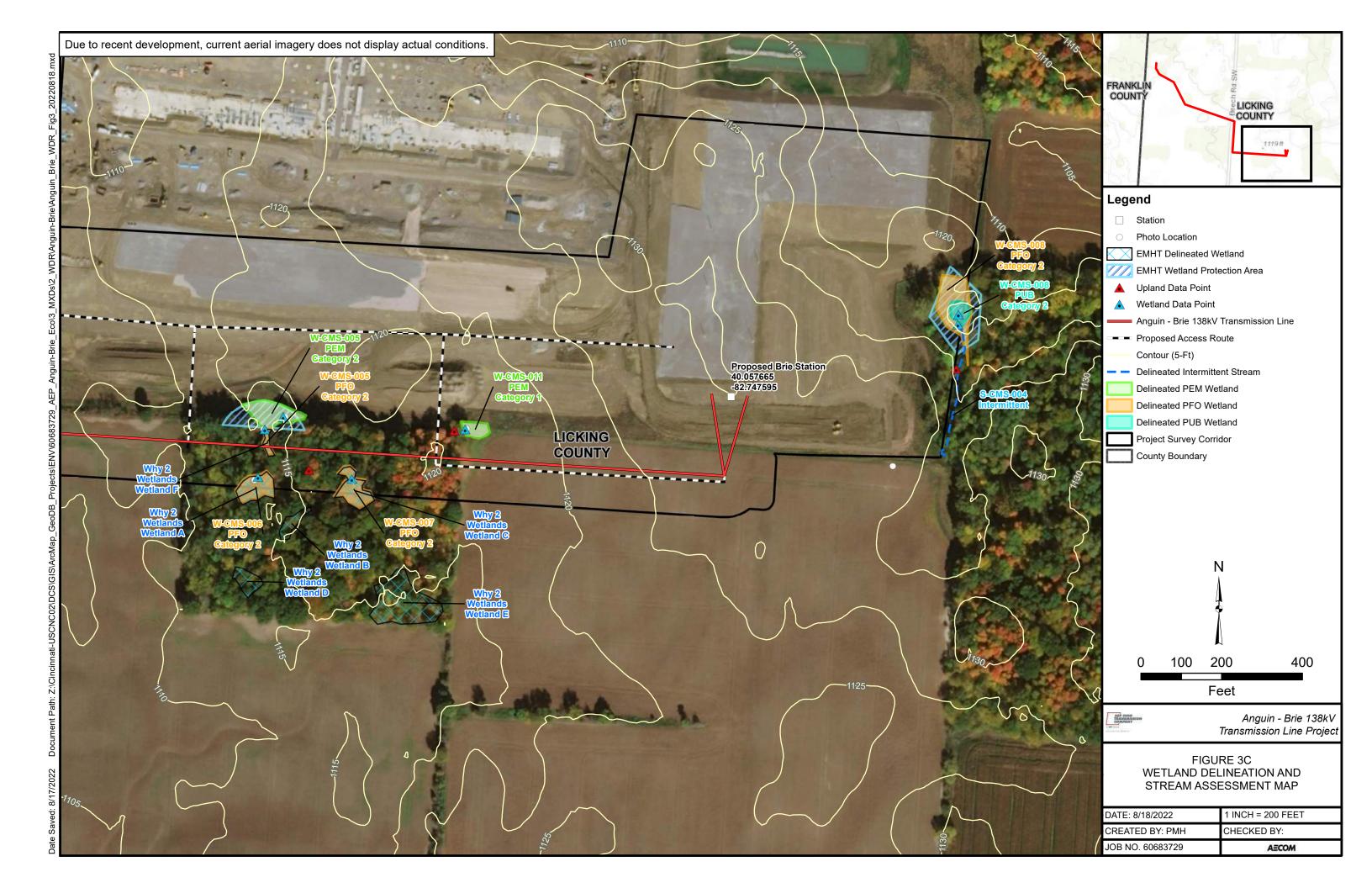


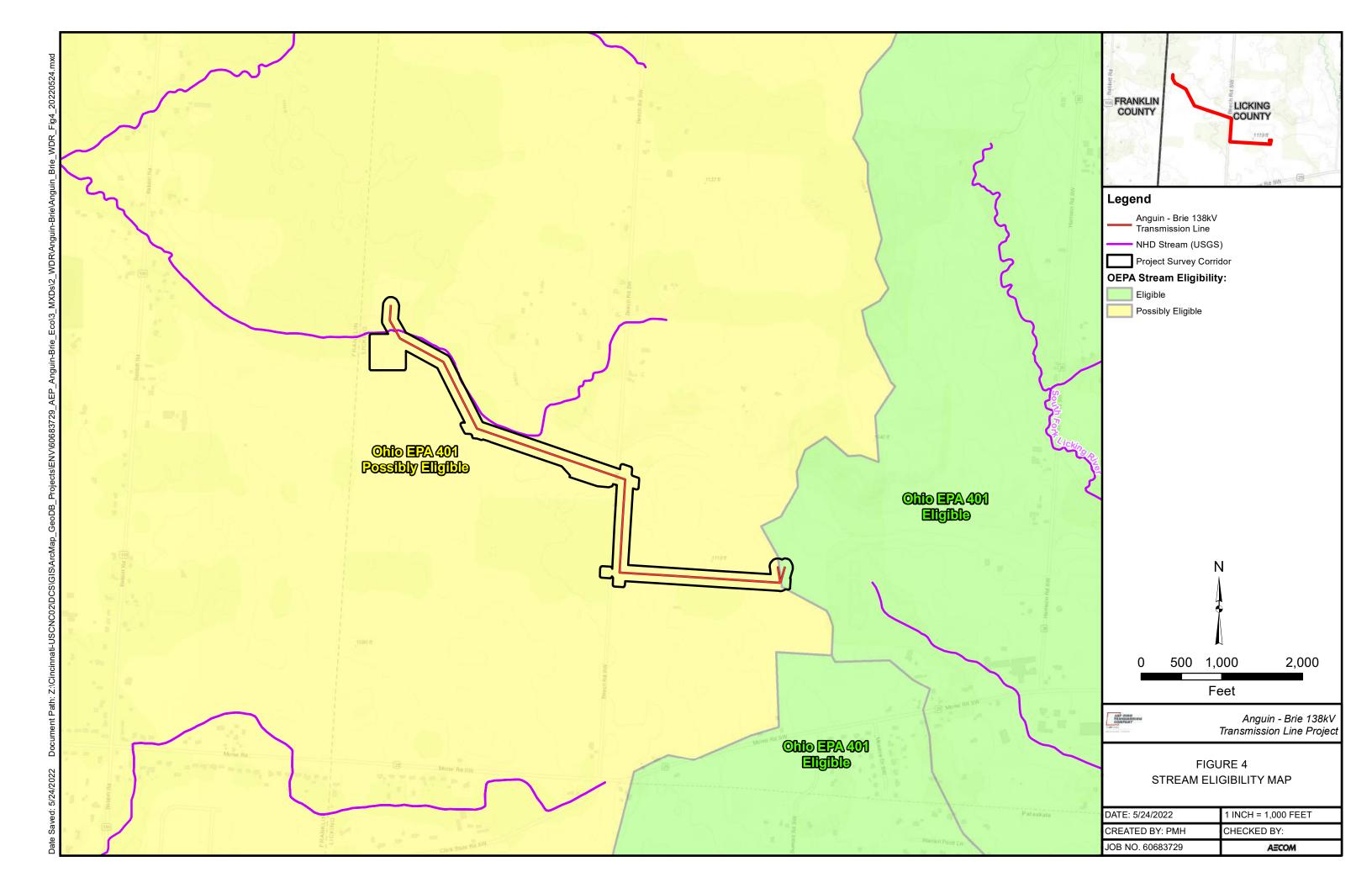


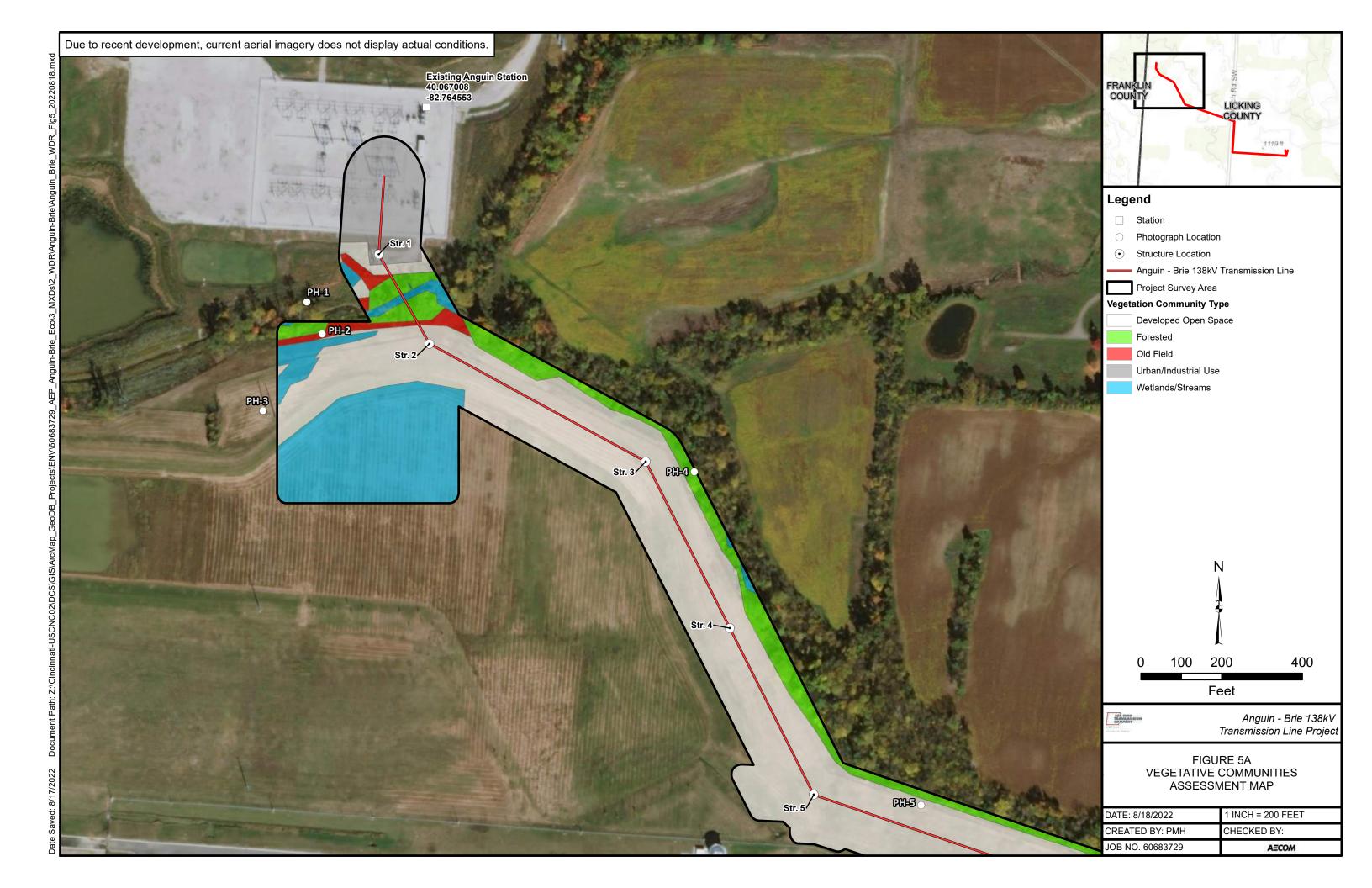


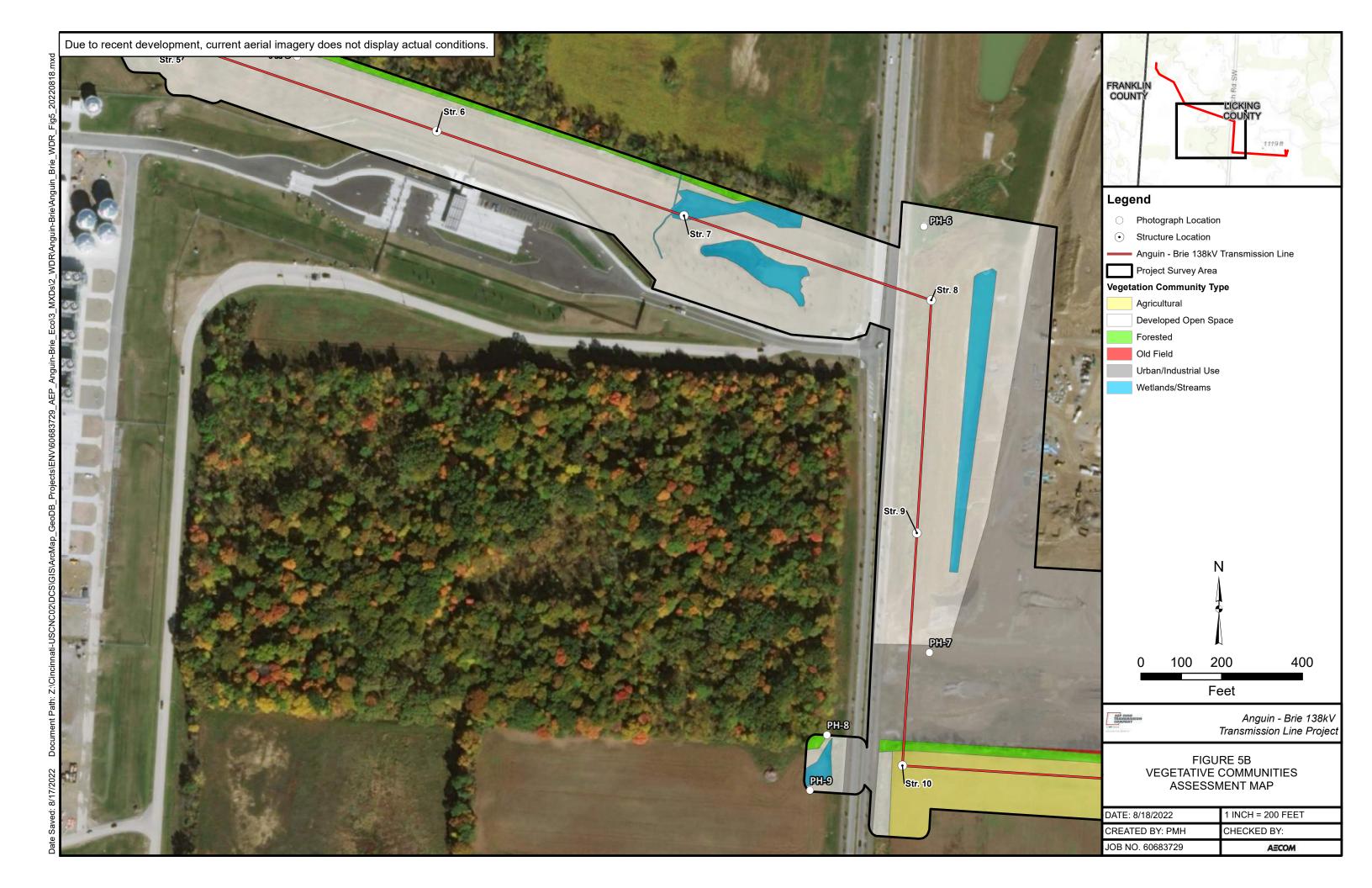


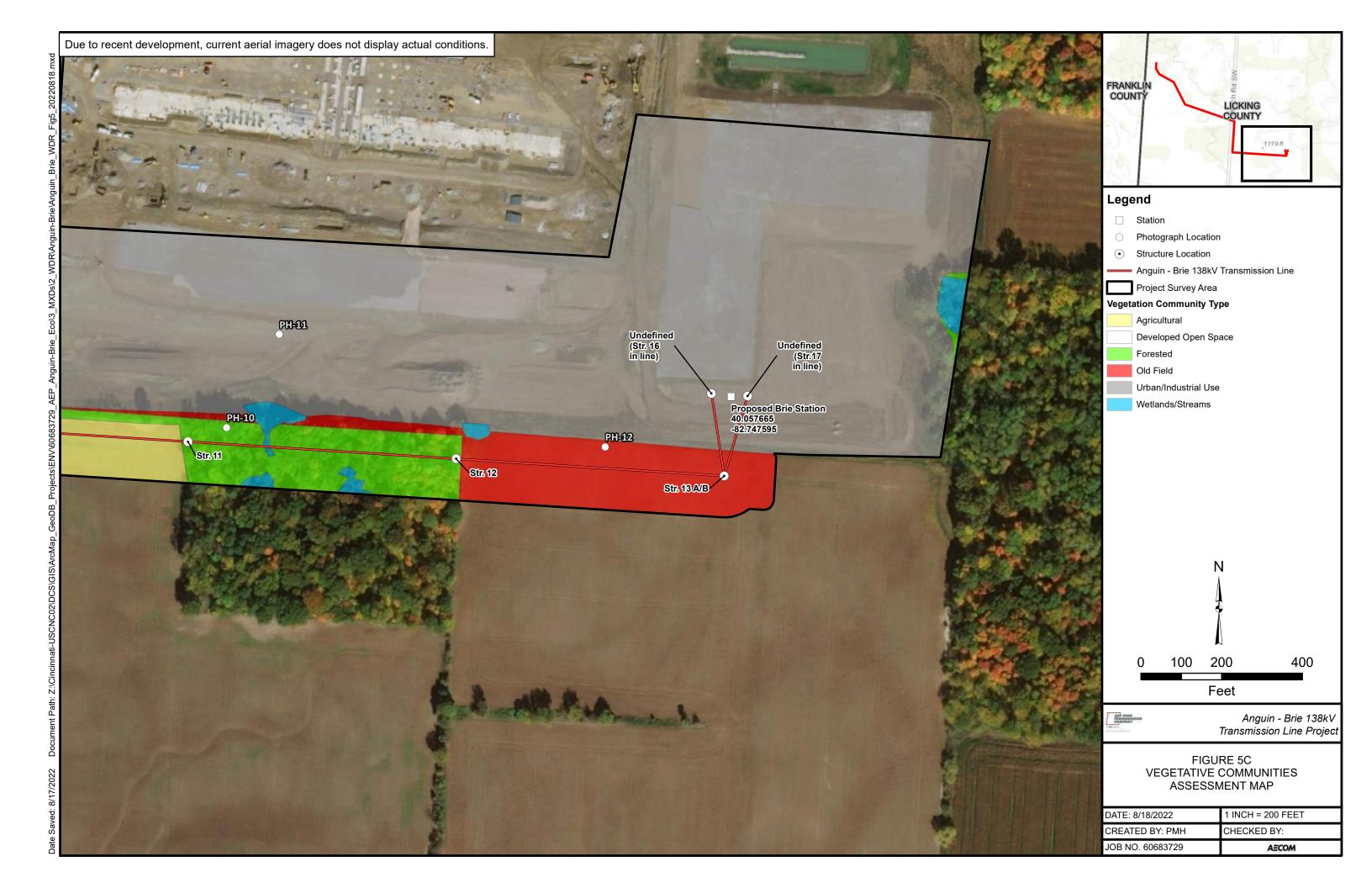












# **APPENDIX A**

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

OEPA WETLAND ORAM FORMS

DELINEATED FEATURES PHOTOGRAPHS (WETLANDS)

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Anguin 138kV Extension No 4/Anguin-Brie	138kV R0	City/Cou	nty: Licking		Sampling Date:	5/10/2022
Applicant/Owner: AEP			_	State: OH	Sampling Point:	W-CMS-001
Investigator(s): CMS, HA		Section, 7	ownship, Ra	nge: 2N 15W S16		
Landform (hillside, terrace, etc.): Flat			Local relief (c	oncave, convex, none):	concave	
Slope (%):3 Lat: _40.06584		Long:	82.765169		Datum: NAD 83	
Soil Map Unit Name: So: Sloan silt loam, Columbus Low	vland, 0 to 2	percent slop	es, frequently	flooded NWI class	fication: NA	
Are climatic / hydrologic conditions on the site typical for	r this time of	year?	Yes x	No (If no, ex	plain in Remarks.)	
Are Vegetation x , Soil x , or Hydrology x si	gnificantly di	sturbed? A	Are "Normal C	Circumstances" present?	YesN	oX
Are Vegetation, Soil, or Hydrologyna	aturally probl	ematic? (	If needed, ex	plain any answers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site ma	p showin	g samplin	g point lo	cations, transects	, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes X No		Is the	Sampled Ar	rea		
Hydrophytic Vegetation Present? Yes X No Is the Sampled A Hydric Soil Present? Yes X No within a Wetland					No	
Wetland Hydrology Present? Yes X No					<u> </u>	
Remarks:		•				
Area has been used as an access for construction of s water from percolating properly through the soil and aff						
The country we had be accounted to a Control of a DEM	المسا	gy, providus	vegetation ne	o been femoved. Wella	na io dominated by	- Took ouriary
VEGETATION – Use scientific names of plan	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test wo	rksheet:	
1				Number of Dominant	•	
2.				Are OBL, FACW, or I		2 (A)
3.				Total Number of Dom Across All Strata:	inant Species	2 (B)
5					Consiss That	2 (B)
		Total Cover		Percent of Dominant Are OBL, FACW, or I	•	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15')				, , , ,		
1.				Prevalence Index w	orksheet:	
2				Total % Cover o	f: Multiply	/ by:
3.					) x 1 =	0
4				· <u> </u>		130
5		Total Cover			<del></del>	<u>45</u> 100
Herb Stratum (Plot size: 5' )		Total Cover			x 5 =	0
1. Phalaris arundinacea	40	Yes	FACW	· —		275 (B)
2. Euthamia graminifolia	25	Yes	FACW	Prevalence Index	``	
3. Valerianella chenopodiifolia	15	No	FAC		<u> </u>	
4. Allium canadense	15	No	FACU	Hydrophytic Vegeta	tion Indicators:	
5. Rosa multiflora	10	No	FACU		Hydrophytic Veget	ation
6				X 2 - Dominance To		
7				X 3 - Prevalence In	dex is ≤3.01 Adaptations¹ (Prov	ida ayanartina
8 9.					ks or on a separate	
10					ophytic Vegetation	,
100	<sup>1</sup> Indicators of hydric s					
Woody Vine Stratum (Plot size: 30')				be present, unless di	•	
1				Hydrophytic		
2				Vegetation		
	=	Total Cover		Present? Yes	XNo	_
Remarks: (Include photo numbers here or on a separa	ite sheet.)					

SOIL Sampling Point: W-CMS-001

	• •	to the dep				ator or o	confirm the absence	of indicators.)			
Depth Matrix Redox Features			<u>-</u>								
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0-4	10YR 3/2	60	7.5YR 4/6	5	<u>C</u>	M	Loamy/Clayey	Prominent redox concentrations			
	10YR 6/2	35									
4-14	10YR 3/1	70	7.5YR 4/6	_ 5	_ C_	M	Loamy/Clayey	Prominent redox concentrations			
	10YR 6/2	20									
							-	-			
1 <sub>T. max</sub> O C			Dadwaad Matrix N				21	DI Dara Liniaa M Matrix			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains						n: PL=Pore Lining, M=Matrix.  rs for Problematic Hydric Soils <sup>3</sup> :					
Hydric Soil Indicators: Histosol (A1) Sandy Gleyed Matrix (S4)						st Prairie Redox (A16)					
				Sandy Redox (S5)				Iron-Manganese Masses (F12)			
Histic Epipedon (A2) Black Histic (A3)				Stripped Matrix (S6)				Red Parent Material (F21)			
l ——	n Sulfide (A4)		Dark Surfa	,	-,		Very Shallow Dark Surface (F22)				
	Layers (A5)		Loamy Mu		eral (F1)		Other (Explain in Remarks)				
2 cm Mu	ck (A10)		Loamy Gle	eyed Mat	trix (F2)						
Depleted	Below Dark Surface	(A11)	Depleted N	/atrix (F	3)						
Thick Dark Surface (A12)  X Redox Dark Surface (F6)				<sup>3</sup> Indicators of hydrophytic vegetation and							
Sandy M	ucky Mineral (S1)		Depleted [				wetland hydrology must be present,				
5 cm Mu	5 cm Mucky Peat or Peat (S3) ? Redox Depressions (F8)					unless disturbed or problematic.					
Restrictive L	ayer (if observed):										
Type:											
Depth (inches):				Hydric Soil Presen	t? Yes <u>X</u> No						
Remarks:											
								s of Hydric Soils, Version 7.0, 2015			
Errata. (nttp:/	//www.nrcs.usda.gov	/internet/F	SE_DOCUMENTS	/nrcs142	2p2_0512	293.doc)	()				
HYDROLO	GV										
_	drology Indicators: ators (minimum of c	no io rogui	rad: abook all that	(براموه			Sacanda	ry Indicators (minimum of two required)			
l ————		irie is requi			wes (RQ)		Secondary Indicators (minimum of two required)  X Surface Soil Cracks (B6)				
Surface Water (A1) X High Water Table (A2)				X Water-Stained Leaves (B9) Aquatic Fauna (B13)				nage Patterns (B10)			
	X Saturation (A3)  True Aquatic Plants (B14)				Dry-Season Water Table (C2)						
	Water Marks (B1)  Hydrogen Sulfide Odor (C1)			)	Crayfish Burrows (C8)						
<del></del>	Sediment Deposits (B2)  Oxidized Rhizospheres on Living I							ration Visible on Aerial Imagery (C9)			
	osits (B3)		Presence			_		ted or Stressed Plants (D1)			
Algal Ma	Algal Mat or Crust (B4)  Recent Iron Reduction in Tilled Sc					lled Soil	s (C6) X Geo	morphic Position (D2)			
Iron Dep	osits (B5)		Thin Muck	Surface	(C7)		X FAC	-Neutral Test (D5)			
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)											
X Sparsely	Vegetated Concave	Surface (E	38)Other (Exp	lain in R	(emarks						
Field Observ	vations:										
Surface Wate				Depth (i	nches): _						
	Water Table Present? Yes X No Depth (inches): 10				10						
Saturation Present? Yes X No Depth (inches): 0			0	Wetland Hydrolo	gy Present? Yes X No						
(includes capillary fringe)											
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:											
Remarks:											
Precipitation provides hydrology. Area floods regulary by adjacent stream.											
	,,		. 5 7 7								
ĺ											

US Army Corps of Engineers

Midwest Region – Version 2.0

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Anguin 138kV Extension No 4/Anguin-Brid	e 138kV R0	City/Cou	nty: Licking		Sampling Dat	te: <u>5/10</u>	)/2022		
Applicant/Owner: AEP				State: OH	Sampling Poi	nt: w-cw	//S-001-UPL		
Investigator(s): CMS, HA		Section, 7	Township, Ra	nge: 2N 15W S16					
Landform (hillside, terrace, etc.): Flat			Local relief (d	concave, convex, none):	concave				
Slope (%): 7 Lat: 40.065793			82.764984		Datum: NAD 83	3			
Soil Map Unit Name: So: Sloan silt loam, Columbus Lo	wland, 0 to 2	percent slop	es, frequently	y flooded NWI class	fication: NA				
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes x	No (If no, ex	plain in Remarks	3.)			
Are Vegetation x , Soil x , or Hydrology x s	significantly o			Circumstances" present?					
Are Vegetation, Soil, or Hydrologyr				xplain any answers in Re			_		
SUMMARY OF FINDINGS – Attach site ma						eatures	s, etc.		
Hydrophytic Vegetation Present? Yes No	. X	Is the	Sampled A	rea					
Hydric Soil Present? Yes No X			n a Wetland		No X				
	X				· —				
Remarks: Area used as an access for construction of storm water percolating properly through the soil and affects hydro	logy. The sa			•			er from		
VEGETATION – Use scientific names of pla	nts. Absolute	Dominant	Indicator	1					
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test wo	rksheet:				
1				Number of Dominant	Species That				
2				Are OBL, FACW, or I	FAC:	2	(A)		
3.				Total Number of Don	ninant Species		<b>(D)</b>		
5.				Across All Strata:		4	_ (B)		
o	<del></del>	Total Cover		Percent of Dominant Are OBL, FACW, or I		50.0%	(A/B)		
Sapling/Shrub Stratum (Plot size: 15' )	·	- rotal Gover		Allo OBE, I MOVV, OI I		00.070	_(''')		
1. Rosa multiflora	30	Yes	FACU	Prevalence Index w	orksheet:				
2. Lonicera canadensis	15	Yes	FACU	Total % Cover o	f: Mult	tiply by:	_		
3.				OBL species	0 x 1 =	0	_		
4				FACW species 5	50 x 2 =	100	_		
5				· —	20 x 3 =	60	_		
	45 :	=Total Cover		· —	<u>'0</u> x 4 =	280	_		
Herb Stratum (Plot size: 5' )	00		E4 014/	· -	$\frac{2}{40}$ $\times 5 = $	10	<b>-</b> (D)		
1. Viola blanda	30	Yes	FACW		42 (A)	450	<b>–</b> <sup>(B)</sup>		
2. Euthamia graminifolia	20	Yes	FACW	Prevalence Index	= B/A =	3.17	_		
Valerianella chenopodiifolia     Allium canadense	15	No No	FACU	Hydrophytic Vegeta	tion Indicators:				
5. Rosa multiflora	10	No	FACU						
6. Dipsacus fullonum	5	No	FACU	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%					
7. Cryptotaenia canadensis	5	No	FAC	3 - Prevalence Index is ≤3.0¹					
8. Veronica persica	2	No	UPL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting					
9.				data in Remar	ks or on a separa	ate sheet	)		
10				Problematic Hyd	rophytic Vegetati	ion¹ (Expl	ain)		
	97 :	=Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must					
Woody Vine Stratum (Plot size: 30')				be present, unless di	sturbed or proble	ematic.			
1				Hydrophytic					
2		T-1-1-0		Vegetation		V			
=Total Cover				Present? Yes	No_	lo <u>X</u>			
Remarks: (Include photo numbers here or on a separ	ate sheet.)								
Upland vegetation present.									

SOIL Sampling Point: -CMS-001-UI

	cription: (Describe	to the depth				tor or c	confirm the a	absence of	indicators.	)	
Depth	Matrix			x Featur		12	T			Damada	
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Textu			Remarks	
0-14	10YR 4/1	100					Loamy/C	layey			
			_								
<del></del>											
							-				
1								2			
	oncentration, D=Depl	etion, RM=R	educed Matrix, N	/IS=Masi	ked Sand	d Grains				ning, M=Matri	
Hydric Soil			Condy Clo	vad Mat	iv (C4)					natic Hydric	Solis":
— Histosol			Sandy Gle	-	IX (54)		-		Prairie Redo		
	pipedon (A2)		Sandy Red		• • • • • • • • • • • • • • • • • • • •		-		-	asses (F12)	
Black Hi	stic (A3) n Sulfide (A4)		Stripped M	•	o)		-		rent Materia	, ,	)\
	` '		Dark Surfa		rol (E1)		-		Explain in R	Surface (F22	)
	d Layers (A5)		Loamy Mu	•	. ,		-	Other (	Ехріаін ін К	emarks)	
	ıck (A10) d Below Dark Surface	(Δ11)	Loamy Gle								
	ark Surface (A12)	(A11)	Redox Dar	,	,		;	3Indicators	of hydronhyd	tic vegetation	and
	fucky Mineral (S1)		Depleted D		` '					must be pres	
	icky Peat or Peat (S3	)	Redox Der		, ,					problematic.	
		,	ROGEN BO		3 (1 0)	1		4111000		problematic.	
	Layer (if observed):										
Type: Depth (ii	achae):		_				Hydric Soi	I Drocont?		Yes	No X
			_				Tiyunc 301	i i ieseiit:		163	<u> </u>
Remarks:	rm is revised from Mid	dwoot Bogion	al Cupplement \	/orgion C	0 to inc	udo tho	NDC6 Eigld	Indicators	of Lludria Cai	ila Varaian 7	0.2015
	m is revised from Mic ://www.nrcs.usda.gov							indicators c	n ryunc 30	iis, veisioii <i>i</i>	.0, 2015
	,,,gogo			,	.p=_00 .		7				
HYDROLO	OGY										
	drology Indicators:										
-	cators (minimum of o	ne is required	d check all that	apply)				Secondary	Indicators (r	minimum of to	wo required)
	Water (A1)	no io roquiroc	Water-Sta		ves (B9)		<del></del> -		Soil Cracks		<u>ro roquirou</u>
	ater Table (A2)		Aquatic Fa		` '		-		ge Patterns		
Saturation	` '		True Aqua				-		ason Water	` ,	
	larks (B1)		Hydrogen			)	-		h Burrows (0		
	nt Deposits (B2)		Oxidized R				oots (C3)	Saturat	ion Visible c	n Aerial Imag	gery (C9)
	posits (B3)		Presence			_	` ′			d Plants (D1)	
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	s (C6)	X Geomo	rphic Position	on (D2)	
Iron Dep	oosits (B5)		Thin Muck	Surface	(C7)		_	FAC-N	eutral Test (	D5)	
Inundati	on Visible on Aerial Ir	nagery (B7)	Gauge or \	Well Dat	a (D9)						
Sparsely	Vegetated Concave	Surface (B8)	Other (Exp	lain in R	emarks)						
Field Obser	vations:										
Surface Wat	ter Present? Ye	s	No X	Depth (i	nches):						
Water Table	Present? Ye	s	No X	Depth (i	nches):						
Saturation P	resent? Ye	s	No X	Depth (i	nches):		Wetland	Hydrology	Present?	Yes	No X
(includes ca	pillary fringe)										
Describe Re	corded Data (stream	gauge, moni	toring well, aeria	l photos	previou	s inspec	ctions), if avai	lable:			
<u> </u>											
Remarks:	amanada de la composição		A/								
One second	ary wetland hydrology	, is present. \	vetiand hydrolog	gy criteri	a not me	τ.					

Project/Site: Anguin 138kV Extension No 4/Anguin-Brie 13	38kV R0	_ City/Cour	nty: Licking		Sampling	g Date: <u>5/1</u>	10/2022
Applicant/Owner: AEP				State: O	H Sampling	g Point: W	-CMS-002
Investigator(s): CMS, HA		Section, To	ownship, Rai	nge: S16 2N 15V	V		
Landform (hillside, terrace, etc.): Flat			ocal relief (c	oncave, convex, n	one): concave		
Slope (%): 3 Lat: 40.065355			32.765663		Datum: NA	ND 83	
Soil Map Unit Name: So: Sloan silt loam, Columbus Lowla	and, 0 to 2 p			flooded NWI			
Are climatic / hydrologic conditions on the site typical for the			Yes x		o, explain in Ren		
Are Vegetation x , Soil x , or Hydrology x sign				circumstances" pre			X
Are Vegetation, Soil, or Hydrologynatu				olain any answers			<del></del>
SUMMARY OF FINDINGS – Attach site map				·		nt feature	es, etc.
Hydrophytic Vegetation Present? Yes X No		Is the	Sampled Ar	92			
Hydric Soil Present? Yes X No			a Wetland?		X No		
Wetland Hydrology Present? Yes X No	<del></del>					<del></del>	
Remarks:							
This sample point is representative of a PEM wetland. The substation. Soils have been compacted. Compaction pre-							
the same of the state of the state of the same of the		nom percon	ating propert	y through the son a	and anects riyuro	logy, vegetat	
VEGETATION – Use scientific names of plants		Dominant	Indicator				
		Dominant Species?	Indicator Status	Dominance Tes	st worksheet:		
1.		- при			inant Species Th	at	
2.				Are OBL, FACW	•	2	(A)
3.				Total Number of	f Dominant Speci	es	<u> </u>
4				Across All Strata	a:	3	(B)
5	<u>_</u>				inant Species Th		
	=	Total Cover		Are OBL, FACW	/, or FAC:	66.7%	(A/B)
Sapling/Shrub Stratum (Plot size: 15' )				Duamalanaa luul			
1. 2.				Prevalence Ind Total % Co		Multiply by:	
3.				OBL species	0 x 1		_
4.				FACW species	43 x 2		_
5.				FAC species	0 x 3	3 = 0	_
	=1	Total Cover		FACU species	20 x 4	80	
Herb Stratum (Plot size: 5' )				UPL species	0 x 5	5 = 0	_
Phalaris arundinacea	20	Yes	FACW	Column Totals:	63 (A)	166	(B)
2. Euthamia graminifolia	15	Yes	FACW	Prevalence Ir	ndex = B/A =	2.63	_
3. Trifolium repens	15	Yes	FACU	Healmanhadia Ma			
4. Poa palustris	<u>5</u> 5	No No	FACU		egetation Indicat		_
Rosa multiflora     Erigeron philadelphicus	3	No No	FACU FACW		est for Hydrophyt nce Test is >50%	•	1
		110	TAOW		nce Index is ≤3.0		
7					ogical Adaptation		supporting
9.					emarks or on a s	,	
10.				Problematic	: Hydrophytic Ve	getation <sup>1</sup> (Ex	plain)
	63 =7	Total Cover		<sup>1</sup> Indicators of hy	dric soil and wetl	and hydrolog	gy must
Woody Vine Stratum (Plot size: 30')				be present, unle	ss disturbed or p	roblematic.	
1				Hydrophytic			
2		F-1-1-C		Vegetation	V Y		
<u> </u>	_	Total Cover		Present?	Yes X	No	
Remarks: (Include photo numbers here or on a separate	sheet.)						
A preponderance of hydrophytic vegeation is present							

Depth Matrix	-			tor or c	onfirm the absence of	of indicators.)				
		x Feature		2						
(inches) Color (moist) %	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks				
0-3 10YR 3/2 80	10YR 5/4	20	<u>C</u>	<u>m</u>	Loamy/Clayey	Distinct redox concentrations				
3-9 10YR 3/1 45	10YR 5/4	10	С	m	Loamy/Clayey	Distinct redox concentrations				
10YR 3/2 45										
	-									
<sup>1</sup> Type: C. Concentration D. Donletion BA	A Doduced Matrix A	AC Mool		Croine	2l costion	: PL=Pore Lining, M=Matrix.				
Type: C=Concentration, D=Depletion, RN  Hydric Soil Indicators:	i=Reduced Matrix, N	/IS=IVIASE	eu Sand	i Grains.		s for Problematic Hydric Soils <sup>3</sup> :				
Histosol (A1)	Sandy Gle	ved Matr	ix (S4)			t Prairie Redox (A16)				
Histic Epipedon (A2)	Sandy Red		IX (O-1)			Manganese Masses (F12)				
Black Histic (A3)	Stripped M			Parent Material (F21)						
Hydrogen Sulfide (A4)	Dark Surfa			Shallow Dark Surface (F22)						
Stratified Layers (A5)	Loamy Mu	ral (F1)			(Explain in Remarks)					
2 cm Muck (A10)	Loamy Gle	•	, ,			,				
Depleted Below Dark Surface (A11)	Depleted N	-								
Thick Dark Surface (A12)	X Redox Dar	k Surfac	e (F6)		<sup>3</sup> Indicator	s of hydrophytic vegetation and				
Sandy Mucky Mineral (S1)	Depleted D	Dark Surf	ace (F7)		wetland hydrology must be present,					
5 cm Mucky Peat or Peat (S3)	Redox Dep		unless disturbed or problematic.							
Restrictive Layer (if observed):										
Type: Gravel										
Depth (inches): 9					Hydric Soil Present	? Yes <u>X</u> No				
Remarks:										
This data form is revised from Midwest Re	gional Supplement \	ersion 2	.0 to inc	ude the	NRCS Field Indicators	s of Hydric Soils, Version 7.0, 2015				
Errata. (http://www.nrcs.usda.gov/Internet/	FSE_DOCUMENTS	/nrcs142	p2_0512	293.docx	()					
					•					
					,					
LIVEROLOGY					,					
HYDROLOGY					,					
Wetland Hydrology Indicators:										
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is req					<u>Secondar</u>	y Indicators (minimum of two required)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is req  Surface Water (A1)	X Water-Stai	ined Lea	, ,		Secondar X Surfa	ce Soil Cracks (B6)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is req Surface Water (A1) High Water Table (A2)	X Water-Stai	ined Leav una (B13	3)		Secondar X Surfa Drain	ce Soil Cracks (B6) age Patterns (B10)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requestriance Water (A1)  High Water Table (A2)  X Saturation (A3)	X Water-Stai Aquatic Fa True Aqua	ined Lea iuna (B13 tic Plants	B) s (B14)		Secondar X Surfa Drain Dry-S	ce Soil Cracks (B6) age Patterns (B10) Geason Water Table (C2)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is req Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1)	X Water-Stai Aquatic Fa True Aqua Hydrogen	ined Leavenuna (B13 tic Plants Sulfide C	3) s (B14) odor (C1)		Secondar X Surfa Drain Dry-S	ce Soil Cracks (B6) age Patterns (B10) beason Water Table (C2) ish Burrows (C8)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is req Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R	ined Lear iuna (B13 tic Plants Sulfide C	3) s (B14) odor (C1) eres on I	iving Ro	Secondar   X Surfa   Drain   Dry-S   Crayf   Dots (C3) Satur	ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requestriance Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence 6	ined Lear nuna (B13 tic Plants Sulfide C Rhizosphe of Reduc	3) s (B14) dor (C1) eres on l ed Iron (	Living Ro	Secondar   X Surfa   Drain   Dry-S   Crayf   Satur   X Stunt	ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence o	ined Lear nuna (B13 tic Plants Sulfide C Rhizospho of Reduct n Reduct	B) B (B14) Codor (C1) Eres on I Ed Iron ( Lion in Ti	Living Ro	Secondar   X Surfa   Drain   Dry-S   Crayf   Drots (C3)   Satur   X Stunt   S (C6)   X Geom	ce Soil Cracks (B6) age Patterns (B10) beason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck	ined Lear iuna (B1; tic Plants Sulfide C thizosphe of Reduct n Reduct Surface	B) G (B14) Ddor (C1) Deres on I D	Living Ro	Secondar   X Surfa   Drain   Dry-S   Crayf   Drots (C3)   Satur   X Stunt   S (C6)   X Geom	ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N	ined Lear auna (B13 tic Plants Sulfide C Rhizosphe of Reduct n Reduct Surface Well Data	B) S (B14) Odor (C1 eres on I ed Iron ( cion in Ti (C7) A (D9)	Living Ro	Secondar   X Surfa   Drain   Dry-S   Crayf   Drots (C3)   Satur   X Stunt   S (C6)   X Geom	ce Soil Cracks (B6) age Patterns (B10) beason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested and seed of the seed of	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N	ined Lear auna (B13 tic Plants Sulfide C Rhizosphe of Reduct n Reduct Surface Well Data	B) S (B14) Odor (C1 eres on I ed Iron ( cion in Ti (C7) A (D9)	Living Ro	Secondar   X Surfa   Drain   Dry-S   Crayf   Drots (C3)   Satur   X Stunt   S (C6)   X Geom	ce Soil Cracks (B6) age Patterns (B10) beason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (BX)  X Sparsely Vegetated Concave Surface  Field Observations:	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or V (B8) Other (Exp	ined Leavanna (B13 tic Plants Sulfide Cantro Reduct on Reduct Surface Well Data blain in R	B) s (B14) dor (C1) eres on I ed Iron ( ion in Ti (C7) a (D9) emarks)	Living Ro	Secondar   X Surfa   Drain   Dry-S   Crayf   Drots (C3)   Satur   X Stunt   S (C6)   X Geom	ce Soil Cracks (B6) age Patterns (B10) beason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (BX)  X Sparsely Vegetated Concave Surface  Field Observations:  Surface Water Present?  Yes	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or V (B8) Other (Exp	ined Leavanna (B13 tic Plants Sulfide Cantide	B) s (B14) dor (C1) eres on I ed Iron ( ion in Ti (C7) a (D9) emarks)	Living Ro	Secondar   X Surfa   Drain   Dry-S   Crayf   Drots (C3)   Satur   X Stunt   S (C6)   X Geom	ce Soil Cracks (B6) age Patterns (B10) beason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (Based Surface)  Field Observations:  Surface Water Present?  Yes  Water Table Present?	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N (B8) No No	ined Leavanna (B13 tic Plants Sulfide Cathizospher of Reduct on Reduct Surface Well Data blain in R	B) s (B14) dor (C1) eres on I ed Iron ( cion in Ti (C7) a (D9) emarks) anches): _ anches): _	Living Ro	Secondar   X   Surfa   Drain   Dry-S   Crayfoots (C3)   Satur   X   Stunt   S (C6)   X   Geon   X   FAC-	ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) sation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (BX)  X Sparsely Vegetated Concave Surface  Field Observations:  Surface Water Present?  Yes	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N (B8) No No	ined Leavanna (B13 tic Plants Sulfide Cantide	B) s (B14) dor (C1) eres on I ed Iron ( cion in Ti (C7) a (D9) emarks) anches): _ anches): _	Living Ro	Secondar   X Surfa   Drain   Dry-S   Crayf   Drots (C3)   Satur   X Stunt   S (C6)   X Geom	ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) sation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (BX)  X Sparsely Vegetated Concave Surface  Field Observations:  Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck 37) Gauge or N Other (Exp	ined Leavanna (B13) tic Plants Sulfide C Rhizosphe of Reduct n Reduct Surface Well Data olain in R  Depth (ir Depth (ir	B) s (B14) dor (C1) eres on I ed Iron ( cion in Ti (C7) a (D9) emarks) enches): enches): enches):	Living Ro C4) Illed Soils	Secondar  X Surfa  Drain  Dry-S  Crayf  Satur  X Stunt  S (C6)  X FAC-	ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) sation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (BX)  X Sparsely Vegetated Concave Surface  Field Observations:  Surface Water Present?  Water Table Present?  Yes  Saturation Present?  Yes  (includes capillary fringe)	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck 37) Gauge or N Other (Exp	ined Leavanna (B13) tic Plants Sulfide C Rhizosphe of Reduct n Reduct Surface Well Data olain in R  Depth (ir Depth (ir	B) s (B14) dor (C1) eres on I ed Iron ( cion in Ti (C7) a (D9) emarks) enches): enches): enches):	Living Ro C4) Illed Soils	Secondar  X Surfa  Drain  Dry-S  Crayf  Satur  X Stunt  S (C6)  X FAC-	ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) sation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (BX)  X Sparsely Vegetated Concave Surface  Field Observations:  Surface Water Present?  Water Table Present?  Yes  Saturation Present?  Yes  (includes capillary fringe)	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck 37) Gauge or N Other (Exp	ined Leavanna (B13) tic Plants Sulfide C Rhizosphe of Reduct n Reduct Surface Well Data olain in R  Depth (ir Depth (ir	B) s (B14) dor (C1) eres on I ed Iron ( cion in Ti (C7) a (D9) emarks) enches): enches): enches):	Living Ro C4) Illed Soils	Secondar  X Surfa  Drain  Dry-S  Crayf  Satur  X Stunt  S (C6)  X FAC-	ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) sation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)				
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (Back Sparsely Vegetated Concave Surface Field Observations:  Surface Water Present?  Water Table Present?  Yes  Water Table Present?  Yes  Saturation Present?  Yes  (includes capillary fringe)  Describe Recorded Data (stream gauge, notes)	X Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N (B8) Other (Exp	ined Leavanna (B13) tic Plants Sulfide C Chizosphe of Reduct n Reduct Surface Well Data blain in R Depth (ir Depth (ir Depth (ir	B) s (B14) dor (C1 eres on I ed Iron ( ion in Ti (C7) a (D9) emarks) aches): _aches): _	Living Ro C4) Illed Soils	Secondar  X Surfa  Drain  Dry-S  Crayf  Satur  X Stunt  S (C6)  X FAC-	ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) sation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)				

Project/Site: Anguin 138kV Extension No 4/Anguin-Brid	e 138kV R0	City/Co	unty: Licking		Sampling D	ate: <u>5/10</u>	0/2022
Applicant/Owner: AEP				State: OH	Sampling P	oint: w-cn	MS-002-UPL
Investigator(s): CMS, HA		Section,	Township, Rai	nge: S16 2N 15W			
Landform (hillside, terrace, etc.): Flat		<del>_</del>	Local relief (c	oncave, convex, no	ne): concave		
Slope (%): 7 Lat: 40.065344		Long:	-82.765421		Datum: NAD	83	
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6	percent slope	s		NWI c	assification: NA		
Are climatic / hydrologic conditions on the site typical for			Yes x	•	, explain in Remar	ks.)	
Are Vegetation x , Soil x , or Hydrology x s	•	•		ircumstances" pres			
Are Vegetation, Soil, or Hydrologyr				plain any answers ir			_
SUMMARY OF FINDINGS – Attach site ma			,		,	features	s, etc.
Hydrophytic Vegetation Present? Yes No	)_X_	Is th	e Sampled Ar	ea			
	$\frac{X}{X}$		in a Wetland?		No _ X		
	X			_		_	
Remarks:		0140 000		, .			
This sample point is representative of the uplands that and substation. Soils have been compacted. Compact							•
VEGETATION – Use scientific names of pla	nts.						
·	Absolute	Dominant	Indicator				
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test	worksheet:		
1 2.				Number of Domir Are OBL, FACW	nant Species That	1	(A)
3.							_(^)
4.				Across All Strata	Dominant Species	4	(B)
5.				Percent of Domir	ant Species That		<b>-</b> ` ′
		Total Cover		Are OBL, FACW	•	25.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15')							_
1				Prevalence Inde			
2				Total % Cov		ultiply by:	_
3.				OBL species	0 x 1 =	0	_
4				FACW species_	35 x 2 =	70	_
5		Total Cover		FAC species FACU species	5 x 3 = 60 x 4 =		_
Herb Stratum (Plot size: 5' )		i otal Covel		UPL species	0 x5=	0	_
1. Phalaris arundinacea	20	Yes	FACW	Column Totals:	100 (A)	325	<b>–</b> (B)
2. Taraxacum officinale	20	Yes	FACU	Prevalence Inc	``	3.25	<b>-</b> ` ′
3. Trifolium repens	20	Yes	FACU				
4. Trifolium repens	20	Yes	FACU	Hydrophytic Veg	getation Indicator	s:	
5. Euthamia graminifolia	10	No	FACW	1 - Rapid Tes	st for Hydrophytic \	/egetation	
6. Ranunculus acris	5	No	FAC		ce Test is >50%		
7. Packera aurea	5	No	FACW		e Index is ≤3.0 <sup>1</sup>		
8					gical Adaptations <sup>1</sup> marks or on a sep		
9.							
10	100 =	 Γotal Cover			Hydrophytic Veget		
Woody Vine Stratum (Plot size: 30')		i otal Covel			Iric soil and wetlan s disturbed or prob		/ must
1					o diotarboa or prot	nomatio.	
2.				Hydrophytic Vegetation			
	=	Total Cover		_	Yes No	X	
Remarks: (Include photo numbers here or on a separ	ate sheet.)						
A preponderance of hydrophytic vegeatation is not pre	,						

SOIL Sampling Point: -CMS-002-UI

	cription: (Describe	to the depth				ator or c	onfirm the	absence c	of indicators	i.)			
Depth	Matrix			x Featur		. 2							
(inches)	Color (moist)	<u>%</u> _	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Text			Remarks			
0-3	10YR 3/2	70	10YR 3/4	30	С	m	Loamy/	Clayey	Distinct	redox concer	trations		
3-8	10YR 3/2	100					Loamy/	Clayey					
							•						
1- 0.0								2					
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, N	/IS=Masi	ked Sand	Grains				ning, M=Matri			
Hydric Soil			Sandy Gla	vod Mat	riv (S4)					-	3011S :		
— Histosol			Sandy Gle	-	IIX (34)				t Prairie Redo	Masses (F12)			
Histic Epipedon (A2)  Black Histic (A3)  Sandy Redox (S5)  Stripped Matrix (S6)									Parent Materi				
Hydrogen Sulfide (A4)  Dark Surface (S7)										Surface (F22	)		
Stratified Layers (A5)  Loamy Mucky Mineral (F1)									(Explain in F	•	,		
	uck (A10)		Loamy Gle	-					(Explain iii i	(omano)			
	d Below Dark Surface	(A11)	Depleted N										
	ark Surface (A12)	( )	Redox Dar	,	,			<sup>3</sup> Indicators	s of hydrophy	tic vegetation	and		
Sandy M	Mucky Mineral (S1)		Depleted D	Dark Sur	face (F7)					must be pres			
5 cm Mu	5 cm Mucky Peat or Peat (S3) Redox Depressions (F8)							unless disturbed or problematic.					
Restrictive	Layer (if observed):												
Type:	Gravel												
Depth (ii	nches):	8					Hydric So	il Present	?	Yes	No X		
Remarks:							-						
	rm is revised from Mid	dwest Regio	nal Supplement \	ersion 2	2.0 to inc	lude the	NRCS Field	d Indicators	of Hydric So	oils, Version 7.	.0, 2015		
Errata. (http:	://www.nrcs.usda.gov	/Internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	293.docx	<b>(</b> )		-				
HYDROLO	OGY												
Wetland Hy	drology Indicators:												
	cators (minimum of o	ne is require								minimum of tw	vo required)		
<del></del>	Water (A1)		Water-Stai		` '				ce Soil Crack				
~	ater Table (A2)		Aquatic Fa	•	•				age Patterns	` '			
Saturation			True Aqua						eason Water				
	larks (B1)		Hydrogen		` '		. (00)		ish Burrows (	,	(00)		
	nt Deposits (B2)		Oxidized R			-	oots (C3)			on Aerial Imag	gery (C9)		
	posits (B3)		Presence of			,	o (CC)			ed Plants (D1)			
	at or Crust (B4) posits (B5)		Recent Iro Thin Muck			ilea Soil	S (C6)		norphic Positi Neutral Test				
	on Visible on Aerial Ir	nagen/ (R7)							Neuliai 1651	(D3)			
I —	Vegetated Concave	0, ,			, ,								
Field Obser		- Curiado (Be	<u> </u>		- Cirianto)								
	ter Present? Ye	s	No X	Depth (i	nches):								
Water Table		s ——			nches):								
Saturation P		s			nches):		Wetland	d Hydrolog	y Present?	Yes	No X		
	pillary fringe)		- <u> </u>	- F /				, 2.39	,,		- <u> </u>		
	corded Data (stream	gauge, mon	nitoring well, aeria	l photos	, previou:	s inspec	tions), if ava	ailable:					
Remarks:													
Wetland hyd	drology not present.												

Project/Site: Anguin 138kV Extension No 4/Anguin-Brid	e 138kV R0	City/Cou	inty: Licking		Sa	ampling Date:	5/10/	/2022
Applicant/Owner: AEP				State:	OH Sa	ampling Point:	W-C	MS-003
Investigator(s): CMS, HA		Section, 1	Γownship, Ra	nge: S25 2N 15	5W			
Landform (hillside, terrace, etc.): Flat			Local relief (c	oncave, convex,	none): cond	ave		
Slope (%): 2 Lat: 40.061164		Long:	82.75579		Datu	ım: NAD 83		
Soil Map Unit Name: Pe: Pewamo silty clay loam, low	carbonate till	, 0 to 2 perce	nt slopes	NW	l classificati	on: NA		
Are climatic / hydrologic conditions on the site typical fo	or this time o	f year?	Yes x	No (If	no, explain	in Remarks.)		
Are Vegetation x , Soil x , or Hydrology x s		-		circumstances" p				
Are Vegetation, Soil, or Hydrology				plain any answer				_
SUMMARY OF FINDINGS – Attach site ma			g point lo	cations, trans	sects, im	portant fea	atures	, etc.
Hydrophytic Vegetation Present? Yes X No	)	Is the	Sampled Ar	ea				
Hydric Soil Present? Yes X No			n a Wetland?		<u> X</u>	No		
· · · · · · · · · · · · · · · · · · ·								
Remarks:								
This sample point is representavite of a PEM wetland substation. Soils have been compacted and affects by								
		- Clation Has b		. Wettaria is dom	mated by ne	Ti topped goic	iciliou.	
VEGETATION – Use scientific names of pla		Dominant	Indicator					
Tree Stratum (Plot size: 30')	Absolute % Cover	Species?	Status	Dominance T	est worksh	eet:		
1.				Number of Do				
2.				Are OBL, FAC	W, or FAC:		2	(A)
3				Total Number		t Species		
4				Across All Stra			2	_ (B)
5		=Total Cover		Percent of Doi			00 00/	(
Sapling/Shrub Stratum (Plot size: 15')	· ———	= rotal Cover		Are OBL, FAC	W, OI FAC.		00.0%	<b>-</b> (A/D)
1.				Prevalence In	dex works	neet:		
2.				Total % C		Multip	ly by:	
3.				OBL species	25	x 1 =	25	<del>-</del>
4.				FACW species	65	x 2 =	130	_
5				FAC species	0	x 3 =	0	_
		=Total Cover		FACU species		x 4 =	60	_
Herb Stratum (Plot size: 5')	40		E4 0)4/	UPL species	0	_ x 5 =	0	<b>-</b> (D)
Euthamia graminifolia     Carex lurida	40	Yes	FACW	Column Totals Prevalence			215	_ (B)
Carex rurida     Phalaris arundinacea	25	Yes No	OBL FACW	Prevalence	muex = b//	A = 2.0	15	_
4. Trifolium repens	10	No	FACU	Hydrophytic \	/egetation	Indicators:		
5. Packera aurea	5	No	FACW		_	rophytic Vege	etation	
6. Taraxacum officinale	5	No	FACU	X 2 - Domina	-			
7.				X 3 - Prevale				
8.				4 - Morpho	ological Ada	ptations <sup>1</sup> (Pro	vide sur	pporting
9				data in	Remarks or	on a separate	e sheet)	)
10				Problemat	ic Hydrophy	rtic Vegetation	า <sup>1</sup> (Expla	ain)
	105	=Total Cover		<sup>1</sup> Indicators of h	•	•	٠,	must
Woody Vine Stratum (Plot size: 30')	)			be present, un	less disturb	ed or problem	atic.	
1.				Hydrophytic				
2		=Total Cover		Vegetation Present?	Yes Y	No		
Describes (Include whate	_	- rotal CUVEI		i ieseiit!	Yes X			
Remarks: (Include photo numbers here or on a separ	ate sneet.)							

	cription: (Describe	to the deptl				ator or o	confirm the	absence o	of indicators	s.)	
Depth	Matrix			x Featur							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Text	ure		Remarks	
0-8	10YR 4/1	90	10YR 4/6	10	С	<u>m</u>	Loamy/0	Clayey	Promine	nt redox conce	entrations
8-12	10YR 4/1	70	10YR 4/6	30	С	m	Loamy/0	Clayey	Promine	nt redox conce	entrations
								<u></u>			
								_			
1		lation DM I	Name and Marketin B	40. 14				21 1'	DI D	Salaa NA NASSA	
Hydric Soil	oncentration, D=Dep	letion, RIVI=I	Reduced Matrix, N	/IS=IVIASI	ked Sand	d Grains	5.			ining, M=Matri: matic Hydric	
Histosol			Sandy Gle	ved Mat	riv (S4)				t Prairie Red	-	3011S .
				-	117 (04)					Masses (F12)	
Histic Epipedon (A2) Black Histic (A3) Stripped Matrix (S6)									Parent Materi		
Hydrogen Sulfide (A4)  Dark Surface (S7)										Surface (F22	)
Stratified Layers (A5)  Stratified Layers (A5)  Loamy Mucky Mineral (F1)									r (Explain in F	•	,
	uck (A10)		Loamy Gle	-				_	( P	,	
	d Below Dark Surface	e (A11)	X Depleted N								
	ark Surface (A12)	,	Redox Dar					<sup>3</sup> Indicator	s of hydrophy	ytic vegetation	and
Sandy N	Mucky Mineral (S1)		Depleted [	ark Sur	face (F7)	)		wetla	nd hydrology	must be prese	ent,
5 cm Mu	5 cm Mucky Peat or Peat (S3) ? Redox Depressions (F8)							unles	s disturbed o	or problematic.	
Restrictive	Layer (if observed):										
Type:											
Depth (i	nches):						Hydric So	il Present	?	Yes X	No
Remarks:											
This data fo	rm is revised from Mi	dwest Regio	nal Supplement \	ersion 2	2.0 to inc	lude the	NRCS Field	Indicators	s of Hydric So	oils, Version 7.	.0, 2015
	://www.nrcs.usda.gov	/Internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	293.doc	x)				
Gravel refus	al at 12 inches.										
HYDROLO	OGY										
Wetland Hy	drology Indicators:										
Primary Indi	cators (minimum of c	ne is require	ed; check all that	apply)				Secondar	y Indicators (	(minimum of ty	vo required)
X Surface	Water (A1)		X Water-Sta	ined Lea	ves (B9)	1		X Surfa	ce Soil Crack	ks (B6)	
X High Wa	ater Table (A2)		Aquatic Fa	iuna (B1	3)			Drain	age Patterns	(B10)	
X Saturation	on (A3)		True Aqua	tic Plant	s (B14)			Dry-S	Season Water	r Table (C2)	
Water M	larks (B1)		Hydrogen	Sulfide C	Odor (C1	)			ish Burrows (	` '	
	nt Deposits (B2)		Oxidized R			-	oots (C3)			on Aerial Imag	gery (C9)
	posits (B3)		Presence							ed Plants (D1)	
	at or Crust (B4)		Recent Iro			illed Soil	ls (C6)		norphic Posit		
	posits (B5)	(D.T)	Thin Muck					X FAC-	Neutral Test	(D5)	
	on Visible on Aerial I	0, ,	Gauge or \		` '						
	Vegetated Concave	Surface (Do	B)Other (Exp	nam m R	emarks)		1				
Field Obser		. V	No	Donth (i	nohoo\.	0.5					
		s X		Depth (i	· -	0.5					
Water Table Saturation F		s X			nches): _ nches):		Wotland	l Hydrolog	gy Present?	Yes X	No
	pillary fringe)	<u> </u>		Deptii (ii	_		VVetiand	i i iyarolog	gy i resent:	163	····
	ecorded Data (stream	gauge, mor	itoring well aeria	l photos	previou	s inspec	ctions), if ava	ilable:			
20001100 110	Data (ottodill	gaago, 11101		. p. 10100	, p.oviou	- mopoc	,, ii avo				
Remarks:											
Precipitation	provides hydrology.	Area recieve	es hydrology from	runoff fi	om adja	cent por	nd.				
ı											

Project/Site: Anguin 138kV Extension No 4/Anguin-Bri	e 138kV R0	City/Cou	inty: Licking		Sampling	Date: 5	5/10/2022
Applicant/Owner: AEP				State: OF	Sampling	Point: v	W-CMS-003-UPL
Investigator(s): CMS, HA		Section, 1	Γownship, Ra	nge: S25 2N 15W	'		
Landform (hillside, terrace, etc.): Flat			Local relief (d	concave, convex, no	ne): concave		
Slope (%): 5 Lat: 40.061105		Long:	82.755581		Datum: NA	D 83	
Soil Map Unit Name: Pe: Pewamo silty clay loam, low	carbonate til	I, 0 to 2 perce	nt slopes	NWI c	lassification: NA		
Are climatic / hydrologic conditions on the site typical for	or this time o	of year?	Yes x	No (If no	o, explain in Rem	narks.)	
Are Vegetation x , Soil x , or Hydrology x		-		Circumstances" pres			X
Are Vegetation, Soil, or Hydrology				plain any answers i			
SUMMARY OF FINDINGS – Attach site ma						nt featu	res, etc.
Hydrophytic Vegetation Present? Yes No	x_	Is the	Sampled A	rea			
	<u> </u>		n a Wetland		No _>	<	
	X			_			
Remarks:							
Representative of the uplland areas that surround W- Soils have been compacted and prevents water from						•	
		oroperly tillout	gir tric 30ii ari	a ancets riyarology,	vegetation nas i	— dista	- DCu.
VEGETATION – Use scientific names of pla		Dominant	Indicator	Г			
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Status	Dominance Tes	t worksheet:		
1.				Number of Domi		at	
2.				Are OBL, FACW	, or FAC:	0	(A)
3				Total Number of		es	
4				Across All Strata		2	(B)
5		-Total Cover		Percent of Domii	•		ο/ (Λ/D)
Sapling/Shrub Stratum (Plot size: 15'		=Total Cover		Are OBL, FACW	, or FAC:	0.09	% (A/B)
1.	•			Prevalence Inde	x worksheet		
2.				Total % Cov		Multiply by	y:
3.				OBL species	0 x 1	= 0	
4.				FACW species	8 x 2	! = 16	<u> </u>
5				FAC species	5 x 3	5 = 15	<u>;                                    </u>
		=Total Cover		FACU species	55x 4		
Herb Stratum (Plot size: 5' )				UPL species	20 x 5		
1. Trifolium repens	50	Yes	FACU	Column Totals:		35′	1(B)
2. Daucus carota	<u>20</u> 8	Yes	FACW	Prevalence In	dex = B/A =	3.99	
Phalaris arundinacea     Trifolium repens	5	No No	FACU	Hydrophytic Ve	netation Indicat	ore:	
5. Plantago major	5	No	FAC		st for Hydrophyti		on
			17.0		ce Test is >50%	-	011
6. 7.					ce Index is ≤3.0 <sup>1</sup>		
8.					gical Adaptation		supporting
9.				data in Re	marks or on a se	eparate sh	eet)
10				Problematic	Hydrophytic Veg	jetation <sup>1</sup> (E	Explain)
	88	=Total Cover		<sup>1</sup> Indicators of hyd		•	0,
Woody Vine Stratum (Plot size: 30'	)			be present, unles	ss disturbed or p	roblematic	
1.				Hydrophytic			
2		=Total Cover		Vegetation	Voc.	No V	
		= i Olai Cover		Present?	Yes	No X	
Remarks: (Include photo numbers here or on a separ	ate sheet.)						

SOIL Sampling Point: -CMS-003-UI

Profile Desc Depth	ription: (Describ Matrix	e to the depth		ument tl ox Featur		ator or c	onfirm the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	% «	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	•							
0-7	10YR 3/2	90	10YR 4/6	10	<u> </u>	m	Loamy/Clayey	Prominent redox concentrations
1							2	
	oncentration, D=De	epletion, RM=R	educed Matrix, I	MS=Mas	ked Sand	d Grains.		n: PL=Pore Lining, M=Matrix.
Hydric Soil I			Const. Ola		-i (C4)			rs for Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy Gle	-				st Prairie Redox (A16)
	ipedon (A2)		Sandy Re					Manganese Masses (F12)
Black His	n Sulfide (A4)		Stripped N Dark Surfa	•	o)			Parent Material (F21) Shallow Dark Surface (F22)
	Layers (A5)		Loamy Mu		orol (E1)			er (Explain in Remarks)
2 cm Mu			Loamy Gle	-	. ,			er (Explain in Remarks)
	ck (A10) Below Dark Surfa	co (A11)	Depleted I	-				
	rk Surface (A12)	ce (ATT)	X Redox Da	•	•		<sup>3</sup> Indicato	rs of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted I		` '			and hydrology must be present,
	cky Peat or Peat (	33)	Redox De					ss disturbed or problematic.
_		•		procession	- (1 0)		4110	oo dictarbod of problematic.
	_ayer (if observed	) <del>.</del>						
Type:	achoo):		_				Hudria Sail Brasan	ve Voc V No
Depth (in			_				Hydric Soil Presen	t? Yes X No
Remarks:	m in raviand from N	Aidwest Degis	ad Cunnlamant )	Varaian (	0 to inc	مطع مامیا	NDCC Field Indicator	en of Lhydria Caila Maraian 7.0. 2015
	//www.nrcs.usda.g							rs of Hydric Soils, Version 7.0, 2015
, ,	npts to excavate p				•		,	
			_					
HYDROLO	GY							
	drology Indicators	<u> </u>						
-	cators (minimum of		d: check all that	apply)			Seconda	ary Indicators (minimum of two required)
	Water (A1)		Water-Sta		ives (B9)			ace Soil Cracks (B6)
	ter Table (A2)		Aquatic Fa					nage Patterns (B10)
Saturatio	n (A3)		True Aqua				Dry-	Season Water Table (C2)
Water M	arks (B1)		Hydrogen	Sulfide (	Odor (C1	)	Cray	fish Burrows (C8)
Sedimen	t Deposits (B2)		Oxidized F	Rhizosph	eres on I	_iving Ro	oots (C3) Satu	ration Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)		Presence	of Reduc	ced Iron (	(C4)	Stun	ited or Stressed Plants (D1)
Algal Ma	t or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soils	s (C6) X George	morphic Position (D2)
Iron Dep	osits (B5)		Thin Muck	Surface	(C7)		FAC	-Neutral Test (D5)
Inundatio	on Visible on Aerial	Imagery (B7)	Gauge or	Well Dat	a (D9)			
Sparsely	Vegetated Concar	ve Surface (B8	Other (Exp	olain in R	(emarks			
Field Observ	vations:							
Surface Water	er Present?	/es	No X	Depth (i	nches): _			
Water Table	Present?	/es	No X	Depth (i				
Saturation P	resent?	/es	No X	Depth (i	nches): _		Wetland Hydrolo	gy Present? Yes No X
(includes cap								
Describe Red	corded Data (strea	m gauge, mon	itoring well, aeria	al photos	, previou	s inspec	tions), if available:	
Domorto								
Remarks:	provides hydrology	/ Δrea recious	e hydrology from	n runoff f	rom adia	cent non	d	
i recipitation	provides rigurology	y. AIGA 1861878	5 flydiology ffoli	i runon n	oni auja	oont pull	u.	

Project/Site: Anguin-Brie 138kV R0	City/Co	unty: Licking		Sampling Date	e: <u>5/10/2022</u>	
Applicant/Owner: AEP			State: OH	Sampling Poir	nt: W-CMS-00	04
Investigator(s): CMS, HA	Section,	Township, Ra	nge: S25 2N 15W			
Landform (hillside, terrace, etc.): Flat	_	Local relief (c	oncave, convex, none	e): concave		
Slope (%): 2 Lat: 40.057356	Long:	-82.75558		Datum: NAD 83		
Soil Map Unit Name: BeA: Bennington silt loam, 0 to 2 per				ssification: NA		
Are climatic / hydrologic conditions on the site typical for th		Yes x	No (If no,	explain in Remarks	.)	
Are Vegetation x , Soil x , or Hydrology x sign	•		circumstances" preser		No X	
Are Vegetation, Soil, or Hydrologynatu			plain any answers in I	<del></del>		
SUMMARY OF FINDINGS – Attach site map			-		eatures, etc	<b>;.</b>
Hydrophytic Vegetation Present? Yes X No	Is th	e Sampled A	ea			
Hydric Soil Present? Yes X No		in a Wetland?		No		
Wetland Hydrology Present? Yes X No						
Remarks:						
This sample point is representative of W-CMS-004 a PEN adjacent construction wash out stations. Wetland domina			iltural field. The area i	s receiving excess	hydrology from	1
VEGETATION – Use scientific names of plants						_
A	bsolute Dominant	Indicator				_
·	Species?	Status	Dominance Test v	worksheet:		
1			Number of Domina Are OBL, FACW, o		1 (A)	
		·		_	1(A)	
			Total Number of Do	ominant Species	1 (B)	
5.			Percent of Domina	nt Species That	(-/	
	=Total Cove		Are OBL, FACW, o	•	100.0% (A/B	3)
Sapling/Shrub Stratum (Plot size: 15' )	<u></u>					
1			Prevalence Index			
2.			Total % Cover		iply by:	
3			OBL species	10 x 1 =	10	
4			FAC species	95 x 2 =	190 0	
5	=Total Cove	, ——	FAC species FACU species	0 x 3 =	0	
Herb Stratum (Plot size: 5' )			UPL species	0 x5=	0	
Symphyotrichum novae-angliae	85 Yes	FACW	Column Totals:	105 (A)	200 (B)	
Phalaris arundinacea	10 No	FACW	Prevalence Inde	ex = B/A = 1	.90	
3. Typha angustifolia	10 No	OBL				
4			Hydrophytic Vege	tation Indicators:		
5				for Hydrophytic Ve	getation	
6			X 2 - Dominance			
7			X 3 - Prevalence			
8				cal Adaptations <sup>1</sup> (Plarks or on a separa		ng
9				ydrophytic Vegetati		
10	105 =Total Cove		<sup>1</sup> Indicators of hydri	· · · · · · · · · · · · · · · · · · ·		÷
Woody Vine Stratum (Plot size: 30')			be present, unless			
1.			Hydrophytic	•		
2.			Vegetation			
	=Total Cove	<u>r</u>	Present? Ye	es <u>X</u> No _		
Remarks: (Include photo numbers here or on a separate	sheet.)					
A preponderance of hydrophytic vegetation is present.						

US Army Corps of Engineers

Doph   Madrix   Redox Features   Remarks   Remarks   Dolor (moist)   %   Dolor (moist)   Dolor (		cription: (Describe	o the depth				tor or o	confirm the abse	ence of indicator	s.)	
Type: C=Concentration, D=Depletion, RM=Reduced Marix, MS=Masked Sand Grains.  Thype: C=Concentration, D=Depletion, RM=Reduced Marix, MS=Masked Sand Grains.  The Indicators for Problematic Hydric Solis*:  Ton-Manganese Masses (F12)  Red Parent Material (F21)  Hydrogen Sulfide (A4)  Dank Surface (S7)  Yes Ystallow Dark Surface (F12)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Som Mucky Pattor Pear (S3)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Som Mucky Peat or Pear (S3)  The Soli Problematic Hydric Soli Present?  Type: Gravel  Depth (inches):  Bepeted Dark Surface (F8)  Wetland Hydrology Indicators (F8)  Wetland Hydrology Indicators (F8)  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required: check all that apoly)  Secondary Indicators (minimum of one is required: check all that apoly)  Secondary Indicators (minimum of one is required: check all that apoly)  Secondary Indicators (minimum of one is required: check all that apoly)  Secondary Indicators (minimum of one is required: check all that apoly)  Secondary Indicators (Finimum of One is required: check all that apoly)  Secondary Indicators (Finimum of One is required: check all that apoly)  Secondary Indicators (Finimum of One is required: check all that apoly)  Secondary Indicators (Finimum of One is required: check all that apoly)  Secondary Indicators (Finimum of One is required: check all that apoly)  Secondary Indicators (Finimum of One is required: check all that apoly)  Secondary Indicators (Finimum of One is	Depth	Matrix					. 2	_			
Type: Ca-Concentration, Da-Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Sandy Rocks (S5) Histosol (A2) Sandy Rocks (S5) Histosol (A3) Stripped Matrix (S6) Red Parent Marenia (P1) Hydrogen Sulfide (A4) Dark Surface (S7) Hydrogen Sulfide (A4) Dark Surface (S7) Hydrogen Sulfide (A4) Dark Surface (S7) Depleted Bark Surface (S7) Cotten (Explain in Remarks) Depleted Matrix (S6) Thick Dark Surface (A11) Depleted Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F3) Thick Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky, Mineral (S1) Sendy Mucky Peat or Peat (S3) Peated Dark Surface (F8) Restrictive Layer (if observed): Type: Gravel Depth (inches):  Hydric Soil Present?  Wetand Hydrology Indicators:  Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Sauration (A3) True Aquatic Plants (B14) Hydrogen Sulfide (A2) Defit Deposits (B2) Derit Deposits (B3) Presence of Reduced fron (C4) X Sauration (A3) True Aquatic Plants (B14) Derit Deposits (B3) Presence of Reduced fron (C4) X Sauration (A3) True Aquatic Plants (B14) Derit Deposits (B3) Presence of Reduced fron (C4) X Sauration (A3) True Aquatic Plants (B14) Derit Deposits (B3) Presence of Reduced fron (C4) X Sauration (A3) True Aquatic Plants (B14) Derit Deposits (B3) Presence of Reduced fron (C4) X Sauration (A3) True Aquatic Plants (B14) Primary Indicators (B4) Recent fron Reduction in Tilled Soils (C6) Inrudation Visible on Aerial Imagery (C7) Sauration (A7) Sauration	(inches)	Color (moist)	<u> </u>	Color (moist)	<u>%</u>	Type'	Loc <sup>2</sup>	-		Remarks	
Hydric Soil Indicators:	0-6	10YR 3/2	85	10YR 4/4	15	С	<u>m</u>	Loamy/Claye	ey Distino	t redox concent	trations
Hydric Soil Indicators:								1			
Hydric Soil Indicators:											
Hydric Soil Indicators:											
Hydric Soil Indicators:								•			
Hydric Soil Indicators:								,			
Hydric Soil Indicators:								•			
Hydric Soil Indicators:	1 <sub>Typo: C-C</sub>	oncontration D-Donl	otion PM-E	Poducod Matrix N				<sup>2</sup> l oc	estion: DI –Doro I	ining M-Matrix	<del></del>
Histosol (A1) Sandy Gleyed Matrix (S4) P. Coast Prairie Redox (A16)   Histosol (A2) Sandy Redox (S5) Iron-Manganese Masses (F12)   Black Histo (A3) Dark Surface (S7) Very Shallow Dark Surface (F22)   Very Care Surfac			etion, Kivi=r	reduced Matrix, I	vio=ivias	keu Sanc	Giailis				
Histic Epipedon (A2)	-			Sandv Gle	ved Mat	rix (S4)				-	
Black Histic (A3)		` '			-	(- )					
Hydrogen Sulfide (A4)						6)					
2 cm Muck (A10)	Hydroge	n Sulfide (A4)		Dark Surfa	ace (S7)	,					
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) X Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Secretitive Layer (if observed): Type: Grave! Depth (inches): Bestrictive Layer (if observed): Type: Type: Grave! Depth (inches): Bestrictive Layer (if observed): Type: Secretitive Layer (if observed): Type: Bestrictive Layer (if observed): Type: Secretitive Layer (and the content of the	Stratified	Layers (A5)		Loamy Mu	icky Mine	eral (F1)			Other (Explain in	Remarks)	
Thick Dark Surface (A12)	2 cm Mu	ck (A10)		Loamy Gle	eyed Mat	rix (F2)					
Sandy Mucky Mineral (S1)	Depleted	l Below Dark Surface	(A11)	Depleted N	Matrix (F	3)					
S cm Mucky Peat or Peat (S3)   Pedox Depressions (F8)   Unless disturbed or problematic.		` '				` '					
Restrictive Layer (if observed):											ent,
Type: Gravel Depth (inches): 6	5 cm Mu	cky Peat or Peat (S3	)	? Redox Dep	pression	s (F8)			unless disturbed	or problematic.	
Remarks: The soil profile meets the criteria for redox dark surface. Mutliple attempts to excavate past 6 inches were made. All resulting in refusal from gravel.	Restrictive	Layer (if observed):									
Remarks: The soil profile meets the criteria for redox dark surface. Mutliple attempts to excavate past 6 inches were made. All resulting in refusal from gravel.  Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Yetland (B1) Surface Water (A1) Yetland (B4) Saturation (A3) True Aquatic Fauna (B13) Saturation (A3) True Aquatic Fauna (B14) Secondary Indicators (minimum of two required) Yes Saturation (A3) True Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) Saturation (A4) S	Type:	Gravel		_							
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface Water (A1) Surface Water (A1) Surface Water (A1) Surface Water (A2) Surface Water (A3) Surface Water (A3) Surface Water (A4) Surface Water (A5) Surface Water (	Depth (ir	nches):	6	_				Hydric Soil Pre	esent?	Yes X	No
### Wetland Hydrology Indicators:    Primary Indicators (minimum of one is required: check all that apply)											
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       X Water-Stained Leaves (B9)       X Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       X Stunted or Stressed Plants (D1)         X Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       X FAC-Neutral Test (D5)         X Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):	The soil prof	ile meets the criteria	for redox da	rk surface. Mutlip	ole attem	pts to ex	cavate p	oast 6 inches were	e made. All result	ing in refusal fro	om gravel.
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       X Water-Stained Leaves (B9)       X Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       X Stunted or Stressed Plants (D1)         X Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       X FAC-Neutral Test (D5)         X Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):											
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       X Water-Stained Leaves (B9)       X Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       X Stunted or Stressed Plants (D1)         X Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       X FAC-Neutral Test (D5)         X Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):											
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       X Water-Stained Leaves (B9)       X Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       X Stunted or Stressed Plants (D1)         X Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       X FAC-Neutral Test (D5)         X Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):	HYDROLO	)GY									
Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  Surface Water (A1)  Aquatic Fauna (B13)  X Saturation (A3)  True Aquatic Plants (B14)  Sediment Deposits (B2)  Drift Deposits (B3)  Tribe Aposits (B7)  Algal Mat or Crust (B4)  Inon Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Other (Explain in Remarks)  Field Observations:  Surface Water Present?  Yes  No  Depth (inches):  Saturation (A2)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Secondary Indicators (minimum of two required)  X Surface Soil Cracks (B6)  Drainage Patterns (B10)  X Surface Soil Cracks (B6)  Drainage Patterns (B10)  Drayfish Burrows (C3)											
Surface Water (A1)	-		ne is require	d. check all that	annly)			Sec	ondary Indicators	(minimum of tw	o required)
High Water Table (A2) X Saturation (A3) True Aquatic Fauna (B13) Drainage Patterns (B10) Dry-Season Water Table (C2) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) X Stunted or Stressed Plants (D1) X Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)  Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	-		no io rogano			ves (B9)					o reguirea)
X Saturation (A3)										, ,	
Water Marks (B1)	l <del></del>	` '			•	,			•	. ,	
Drift Deposits (B3)		` '				, ,	)		-		
Algal Mat or Crust (B4)	Sedimer	nt Deposits (B2)		Oxidized F	Rhizosph	eres on l	iving R	oots (C3)	Saturation Visible	on Aerial Imag	ery (C9)
Iron Deposits (B5)	Drift Dep	oosits (B3)		Presence	of Reduc	ed Iron (	C4)	X	Stunted or Stress	ed Plants (D1)	
Inundation Visible on Aerial Imagery (B7)	X Algal Ma	t or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	ls (C6) X	Geomorphic Posi	tion (D2)	
X Sparsely Vegetated Concave Surface (B8)Other (Explain in Remarks)  Field Observations:  Surface Water Present? Yes NoDepth (inches): Water Table Present? Yes NoDepth (inches): Saturation Present? Yes NoDepth (inches): (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks: Precipitation provides hydrology. Area recieves hydrology from runoff from culvert that is the outflow for concrete wash out stations and construction								<u>X</u>	FAC-Neutral Test	(D5)	
Field Observations:  Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes X No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:  Precipitation provides hydrology. Area recieves hydrology from runoff from culvert that is the outflow for concrete wash out stations and construction			0 , , ,			, ,					
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes X No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:  Precipitation provides hydrology. Area recieves hydrology from runoff from culvert that is the outflow for concrete wash out stations and construction			Surface (B8	3)Other (Exp	plain in R	emarks)		1			
Water Table Present? Yes No Depth (inches): Saturation Present? Yes X No Depth (inches): 0  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks: Precipitation provides hydrology. Area recieves hydrology from runoff from culvert that is the outflow for concrete wash out stations and construction					<b>5</b>						
Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:  Precipitation provides hydrology. Area recieves hydrology from runoff from culvert that is the outflow for concrete wash out stations and construction						´ <del>-</del>					
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:  Precipitation provides hydrology. Area recieves hydrology from runoff from culvert that is the outflow for concrete wash out stations and construction						_		Wetlend Used	lualami Duacant?	Vaa V	Na
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:  Precipitation provides hydrology. Area recieves hydrology from runoff from culvert that is the outflow for concrete wash out stations and construction			^_	NU	pehin (I	iones).	U	vveuana riya	ii ology Present?	169	NO
Remarks: Precipitation provides hydrology. Area recieves hydrology from runoff from culvert that is the outflow for concrete wash out stations and construction			dalide mor	nitoring well aeria	l nhotos	previous	s inspec	tions) if available	<i>j</i> .		
Precipitation provides hydrology. Area recieves hydrology from runoff from culvert that is the outflow for concrete wash out stations and construction	2000 INC	co. dod Data (strodili	gaage, mor		p. 10103	, proviou	. mopec	monoj, ii avaliable	··		
	Remarks:										
vehicle cleaning stations.			Area recieve	es hydrology from	runoff f	om culve	ert that i	s the outflow for o	concrete wash out	t stations and co	onstruction
	vehicle clear	ning stations.									

Project/Site: Anguin-Brie 138kV R0		City/Cou	unty: Licking		Sampling Da	ate: <u>5/10</u>	/2022
Applicant/Owner: AEP				State: OH	Sampling Po	oint: w-cM	IS-004-UPL
Investigator(s): CMS, HA		Section,	Township, Ra	nge: S25 2N 15W			
Landform (hillside, terrace, etc.): Flat			Local relief (c	concave, convex, non	ie): concave		
Slope (%): 2 Lat: 40.057315		Long:	-82.755629		Datum: NAD 8	33	
Soil Map Unit Name: BeA: Bennington silt loam, 0 to 2	percent slope				assification: NA		
Are climatic / hydrologic conditions on the site typical			Yes x	No (If no,	explain in Remark	(s.)	
Are Vegetation x , Soil x , or Hydrology x		-		Circumstances" prese			
Are Vegetation, Soil, or Hydrology				plain any answers in			_
SUMMARY OF FINDINGS – Attach site m				-		features	, etc.
Hydrophytic Vegetation Present? Yes X N	0	Is the	e Sampled A	·ea			
	o X		in a Wetland1		NoX		
	o X						
Remarks: This sample point is representative of the upland are receiving excess hydrology from adjacent construction				•	•	ıral field, th	at is
VEGETATION – Use scientific names of pla		Daminant	la dia atau				
<u>Tree Stratum</u> (Plot size: 30' )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test	worksheet:		
1				Number of Domina	ant Species That		
2.				Are OBL, FACW,	or FAC:	3	(A)
3.				Total Number of D	Oominant Species		<i>(</i> = )
4				Across All Strata:	-	3	_ (B)
5		Total Cover		Percent of Domina Are OBL, FACW,	•	100.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15'		Total Gover		Allo OBE, I MOVV,		100.070	_ (,,,,,)
1.	, 			Prevalence Index	worksheet:		
2.				Total % Cove	erof: Mu	ıltiply by:	_
3				OBL species	0 x 1 =	0	_
4				FACW species	70 x 2 =	140	_
5				FAC species	20 x 3 =	60	_
Herb Stratum (Plot size: 5' )	=	Total Cover		FACU species UPL species	5 x 4 = 0 x 5 =	20 0	_
Herb Stratum (Plot size: 5' )  1. Symphyotrichum novae-angliae	40	Yes	FACW	Column Totals:	95 (A)	220	(B)
Phalaris arundinacea	20	Yes	FACW	Prevalence Ind		2.32	_(_)
3. Ranunculus acris	20	Yes	FAC				_
4. Packera aurea	10	No	FACW	Hydrophytic Veg	etation Indicators	;;	
5. Digitaria sanguinalis	5	No	FACU	1 - Rapid Tes	t for Hydrophytic V	egetation	
6				X 2 - Dominance	e Test is >50%		
7				X 3 - Prevalence			
8					ical Adaptations <sup>1</sup> (		
9.					narks or on a sepa		
10		<del></del>		· · · · · · · · · · · · · · · · · · ·	lydrophytic Vegeta		
Woody Vine Stratum (Plot size: 30'	95 =	Total Cover		<sup>1</sup> Indicators of hydr be present, unless	ic soil and wetland		must
· · · · · · · · · · · · · · · · · · ·	)				s disturbed of prob	emalic.	
1. 2.				Hydrophytic Vegetation			
<del>-</del>		Total Cover		_	es X No		
Remarks: (Include photo numbers here or on a sepa							
A preponderance of hydrophytic vegetation is presen							

SOIL Sampling Point: -CMS-004-UI

	cription: (Describe	to the depth				ator or o	confirm the al	bsence of indicate	ors.)	
Depth	Matrix			x Featur		. 2				
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Textur		Remarks	
0-6	10YR 3/2	100					Loamy/Cla	ayey		
			_							
							•			
	oncentration, D=Dep	etion, RM=R	educed Matrix, N	/IS=Masl	ked Sand	d Grains		Location: PL=Pore		
Hydric Soil			0		···· (O.4)		Ir	ndicators for Prob	•	Soils":
— Histosol			Sandy Gle		rix (S4)		_	Coast Prairie R		
	pipedon (A2)		Sandy Red		• • • • • • • • • • • • • • • • • • • •		_	Iron-Manganese		
	stic (A3) n Sulfide (A4)		Stripped M	,	<b>)</b>		_	Red Parent Mat	ark Surface (F22	١
	l Layers (A5)		Dark Surfa		oral (E1)		_	Other (Explain i		)
	ick (A10)		Loamy Gle	-			_	— Other (Explain)	ii Reiliaiks)	
	d Below Dark Surface	. (Δ11)	Depleted N							
	ark Surface (A12)	(A11)	Redox Dai	,	,		31	Indicators of hydro	nhytic vegetation	and
	lucky Mineral (S1)		Depleted [		` '				gy must be prese	
	icky Peat or Peat (S3	3)	Redox De		` '				d or problematic.	J111,
	Layer (if observed):	,			- ()	1			F	
Type:	Clay Fragi	nan								
Depth (ii		6	_				Hydric Soil	Present?	Yes	No X
. `			_				Tiyano con	T TOSCITE.		<u> </u>
Remarks: The soil proi	fle does not meet the	criteria for a	ny hydric soil inc	dicators						
The son pro	ne does not meet the	ontona ioi a	ily ilyano son illa	aloutors.						
HYDROLO	GY									
Wetland Hy	drology Indicators:									
	cators (minimum of o	ne is required	d; check all that	apply)			S	Secondary Indicator	rs (minimum of tv	vo required)
Surface	Water (A1)	•	Water-Sta	ined Lea	ves (B9)			Surface Soil Cra	acks (B6)	
High Wa	iter Table (A2)		Aquatic Fa	una (B1	3)		_	 Drainage Patter	ns (B10)	
Saturation	on (A3)		True Aqua	tic Plant	s (B14)		_	Dry-Season Wa	ater Table (C2)	
Water M	arks (B1)		Hydrogen	Sulfide C	Odor (C1)	)	_	Crayfish Burrow	/s (C8)	
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosph	eres on l	_iving R	oots (C3)	Saturation Visib	le on Aerial Imag	gery (C9)
Drift Dep	oosits (B3)		Presence	of Reduc	ed Iron (	(C4)			ssed Plants (D1)	
	at or Crust (B4)		Recent Iro			lled Soil		Geomorphic Po		
	osits (B5)		Thin Muck				<u></u>	X FAC-Neutral Te	est (D5)	
	on Visible on Aerial Ir	0 , , ,	Gauge or \		, ,					
Sparsely	Vegetated Concave	Surface (B8)	Other (Exp	olain in R	emarks)					
Field Obser										
Surface Wat				Depth (i	_					
Water Table		s			nches): _		1			
Saturation P		s	No X	Depth (ii	nches):_		Wetland F	Hydrology Presen	t? Yes	No X
	pillary fringe)		tania a U : 1	- ۱ - ما مد ا		- !	# 1	able.		
Describe Re	corded Data (stream	gauge, moni	toring well, aeria	ıı pnotos	, previous	sinspec	aions), it availa	anie:		
Remarks:										
	and/or secondary wet	land hydrolog	y indicators wer	e preser	nt at the f	ime of s	ampling.			
		, ,	,,	,		•	1 3			
1										

Project/Site: Anguin-Brie 138kV R0/Brie Substation		City/Cou	inty: Licking			Sampling Da	te: <u>5/11</u>	1/2022
Applicant/Owner: AEP				State:	ОН	Sampling Poi	nt: W-C	CMS-005
Investigator(s): CMS, HA		Section, 7	Γownship, Rar	nge: S25 2N	15W			
Landform (hillside, terrace, etc.): Flat			Local relief (c	oncave, convex	k, none): <u>c</u>	oncave		
Slope (%): 1 Lat: 40.057517		Long: -	82.751562			Datum: DDNAI	D 83	
Soil Map Unit Name: BeA: Bennington silt loam, 0 to 2	percent slop	es		N\	VI classifi	cation: NA		
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes x	No (	If no, expl	ain in Remark	s.)	
Are Vegetation , Soil , or Hydrology	significantly of	disturbed? A	Are "Normal C	ircumstances"				
Are Vegetation, Soil, or Hydrologyr	naturally prob	olematic? (	If needed, exp	plain any answe	ers in Rem	arks.)		_
SUMMARY OF FINDINGS – Attach site ma			g point lo	cations, trai	nsects,	mportant f	eatures	s, etc.
Hydrophytic Vegetation Present? Yes X No	)	Is the	Sampled Ar	ea				
Hydric Soil Present? Yes X No			n a Wetland?		es X	No		
Wetland Hydrology Present? Yes X No						<u></u>		
Remarks:								
This sample point is representative of the PEM portion spotted touch-me-not, and fox sedge. Previously farm		005 a PEM.P	FO wetland co	omplex. The we	etland is de	ominated by fo	wl bluegra	ass,
VEGETATION – Use scientific names of pla	nts.							
- O	Absolute	Dominant	Indicator					
Tree Stratum (Plot size: 30' ) 1.	% Cover	Species?	Status	Dominance				
2.				Number of D Are OBL, FA		•	3	(A)
3.		-		Total Numbe		_		_('')
4.				Across All St		_	3	(B)
5.				Percent of D	ominant S	pecies That		_
	:	=Total Cover		Are OBL, FA	CW, or FA	\C: _	100.0%	<b>_</b> (A/B)
Sapling/Shrub Stratum (Plot size: 15')	1			Duninglaman	la daya	drahaat.		
1				Prevalence Total %	Cover of:		tiply by:	
3				OBL species		x 1 =	0	_
4.				FACW speci		x 2 =	180	_
5.				FAC species	10	x 3 =	30	_
		=Total Cover		FACU specie	es 0	x 4 =	0	<u> </u>
Herb Stratum (Plot size: 5')				UPL species		x 5 =	0	_
Impatiens capensis	50	Yes	FACW	Column Tota			210	(B)
2. Euthamia graminifolia	20	Yes	FACW	Prevalenc	e Index =	B/A =	2.10	_
3. Carex vulpinoidea	20	Yes	FACW	Handan ada di				
4. Acer rubrum	10	No	FAC_		_	on Indicators:		
5 6.			-	X 2 - Domi		Hydrophytic Ve	getation	
_				X 3 - Preva				
7. 8.						Adaptations <sup>1</sup> (F	Provide su	upporting
9.					-	or on a separ		
10.				Problem	atic Hydro	phytic Vegetat	ion¹ (Exp	lain)
	100	=Total Cover	<u></u>	<sup>1</sup> Indicators of	f hydric so	il and wetland	hydrology	y must
Woody Vine Stratum (Plot size: 30'	)			be present, u	ınless dist	urbed or proble	ematic.	
1.				Hydrophytic	;			
2		T-1-1-0		Vegetation		v ••		
		=Total Cover		Present?	Yes_	X No_		
Remarks: (Include photo numbers here or on a separ	,							
A preponderance of hydrophytic vegetation is present	•							

	. ,	to the depti				tor or o	confirm the absence	of indicators.)	
Depth	Matrix			x Featur		. 2	_		
(inches)	Color (moist)	<u> </u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-10	10YR 5/1	70	10YR 5/6	30	<u> </u>	<u>m</u>	Loamy/Clayey	Prominent redox concentrations	3
	-								—
									—
l <del></del>		· — –							
	oncentration, D=Dep	letion, RM=I	Reduced Matrix, N	/IS=Mas	ked Sand	Grains		n: PL=Pore Lining, M=Matrix.	
Hydric Soil			0 1 01		. (0.1)			rs for Problematic Hydric Soils <sup>3</sup> :	
Histosol	` '		Sandy Gle		rix (S4)			st Prairie Redox (A16)	
	pipedon (A2)		Sandy Red		• •			Manganese Masses (F12)	
Black Hi	` '		Stripped M	,	5)			Parent Material (F21)	
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)	
	Layers (A5)		Loamy Mu	-			Othe	er (Explain in Remarks)	
2 cm Mu	` '	- (044)	Loamy Gle	•					
	l Below Dark Surface ark Surface (A12)	e (A11)	x Depleted N				3Indicate	rs of hydrophytic vegetation and	
	lucky Mineral (S1)		Depleted [		` '			and hydrology must be present,	
	cky Peat or Peat (S	2)	Redox Dep					ss disturbed or problematic.	
			Redox Dep	316331011	3 (1 0)	-	unie	as disturbed of problematic.	
	Layer (if observed):								
Type:	·						Uhadaia Cail Bassan	42 Vaa V Na	
Depth (ir	iches).		_				Hydric Soil Presen	t? Yes <u>X</u> No	_
Remarks:	:	fa., b., .;							
The soil prof	ile meets the criteria	for naving a	depleted matrix.						
HYDROLO	OGY								
Wetland Hy	drology Indicators:								
-	cators (minimum of c		ed: check all that	apply)			Seconda	ry Indicators (minimum of two require	ed)
-	Water (A1)		X Water-Sta		ves (B9)			ace Soil Cracks (B6)	
High Wa	ter Table (A2)		Aquatic Fa					nage Patterns (B10)	
x Saturation	on (A3)		True Aqua	`	,			Season Water Table (C2)	
Water M	arks (B1)		Hydrogen			)		fish Burrows (C8)	
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosph	eres on l	iving R	oots (C3)Satu	ration Visible on Aerial Imagery (C9)	)
Drift Dep	osits (B3)		Presence	of Reduc	ced Iron (	C4)	Stun	ted or Stressed Plants (D1)	
Algal Ma	it or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	ls (C6) Geo	morphic Position (D2)	
Iron Dep	osits (B5)		Thin Muck	Surface	(C7)		X FAC	-Neutral Test (D5)	
Inundation	on Visible on Aerial I	magery (B7)	Gauge or	Well Dat	a (D9)				
Sparsely	Vegetated Concave	e Surface (B	B)Other (Exp	olain in R	temarks)				
Field Obser	vations:								
Surface Wat	er Present? Ye	es	No	Depth (i	nches): _				
Water Table	Present? Ye	es	No	Depth (i	nches): _				
Saturation P	resent? Ye	es x	No	Depth (i	nches): _	0	Wetland Hydrolo	gy Present? Yes X No	
(includes car	oillary fringe)								
Describe Re	corded Data (stream	gauge, mor	nitoring well, aeria	l photos	, previou	s inspec	ctions), if available:		
<u> </u>									
Remarks:	provides budgets								
Precipitation	provides hydrology.								
1									

Project/Site: Anguin-Brie 138kV R0/Brie Substation		City/Cou	inty: Licking		Sampling Da	te: <u>5/11</u>	1/2022
Applicant/Owner: AEP				State: OH	Sampling Po	int: W-C	CMS-005
Investigator(s): CMS, HA		Section,	Γownship, Ra	inge: S25 2N 15W			
Landform (hillside, terrace, etc.): Flat			Local relief (d	concave, convex, none	): concave		
Slope (%): 1 Lat: 40.057432		Long: -	82.751724		Datum: NAD 8	3	
Soil Map Unit Name: BeA: Bennington silt loam, 0 to 2	percent slop	es		NWI clas	sification: NA		
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes x	No (If no, e	explain in Remark	s.)	
Are Vegetation, Soil, or Hydrologys	significantly o	listurbed?	Are "Normal (	Circumstances" presen			
Are Vegetation, Soil, or Hydrology				xplain any answers in F			_
SUMMARY OF FINDINGS – Attach site ma			•		,	eatures	s, etc.
Hydrophytic Vegetation Present? Yes X No	)	Is the	Sampled A	rea			
			n a Wetland		No		
Wetland Hydrology Present? Yes X No							
Remarks: This sample point is representative of W-CMS-005 a	PFO wetland	dominated b	v box elder. b	olack locust, red maple	. American elm. s	potted tou	uch-me-
not, flat topped goldenrod and yellow avens.				,	,, -		
<b>VEGETATION</b> – Use scientific names of pla							
Tree Stratum (Plot size: 30' )	Absolute % Cover	Dominant Species?	Indicator	Dominance Test w	vorkahaati		
Tree Stratum (Plot size: 30' )  1. Acer negundo	20	Species? Yes	Status FAC	Number of Domina			
Robinia pseudoacacia	20	Yes	FACU	Are OBL, FACW, o		6	(A)
3. Acer rubrum	20	Yes	FAC	Total Number of Do	_		_` ′
4. Ulmus americana	20	Yes	FACW	Across All Strata:	_	8	(B)
5.				Percent of Dominar	nt Species That		_
	80 :	=Total Cover		Are OBL, FACW, o		75.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15'	)						
Rosa multiflora	5	Yes	FACU	Prevalence Index			
2.				Total % Cover		tiply by:	_
3.				OBL species	0 x 1 = _	0	_
5.				FACW species  FAC species	120 x 2 = 40 x 3 =	240 120	_
J	5 :	Total Cover		FACU species	25 x 4 =	100	_
Herb Stratum (Plot size: 5' )		- 10tai 0010i		UPL species	0 x 5 =	0	_
1. Impatiens capensis	40	Yes	FACW	<del></del>	185 (A)	460	(B)
Euthamia graminifolia	20	Yes	FACW	Prevalence Inde		2.49	<b>-</b> ` ′
3. Geum aleppicum	20	Yes	FACW				_
4. Poa palustris	15	No	FACW	Hydrophytic Veget	tation Indicators	:	
5. Phalaris arundinacea	5	No	FACW	1 - Rapid Test f	for Hydrophytic Ve	getation	
6				X 2 - Dominance			
7				X 3 - Prevalence			
8					al Adaptations <sup>1</sup> (F		
9					arks or on a sepai		•
10	400	Total Cover			drophytic Vegetat		
Woody Vine Stratum (Plot size: 20)	100 :	=Total Cover		<sup>1</sup> Indicators of hydric be present, unless			/ must
Woody Vine Stratum (Plot size: 30' )	1			·	uisturbed or probl	zilialit.	
1 2.				Hydrophytic			
<del>-</del>	<del></del>	=Total Cover		Vegetation Present? Ye	s X No		
Remarks: (Include photo numbers here or on a separ				1	<u> </u>		
A preponderance of hydrophytic vegeation is present.	,						
, , ,							

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	cription: (Describe	to the dept				ator or o	confirm the abse	nce of indicators	s.)	
Depth	Matrix			x Featur		. 2	_			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-4	10YR 5/2	100					Loamy/Claye	<u>y</u>		
4-10	10YR 5/1	100					Loamy/Claye	у		
10-16	10YR 4/1	70	10YR 2/1	30	С	m	Loamy/Claye	y Faint	redox concentr	ations
			_		·					
1Type: C-C	oncentration, D=Dep	letion RM-	Peduced Matrix N	 12-Mac	ked Sand		21 000	ation: PL=Pore L	ining M-Matrix	,
Hydric Soil		iction, rawi	reduced Matrix, it	/IO=IVIAS	nca Gari	Oranis		cators for Proble		
Histosol			Sandy Gle	yed Mat	rix (S4)			Coast Prairie Red	-	
	oipedon (A2)		Sandy Red	-	` ,			ron-Manganese I		
Black Hi			Stripped M		5)			Red Parent Mater		
Hydroge	n Sulfide (A4)		Dark Surfa	ice (S7)				Very Shallow Dar	k Surface (F22)	)
Stratified	d Layers (A5)		Loamy Mu	cky Mine	eral (F1)		<u> </u>	Other (Explain in	Remarks)	
2 cm Mu	ıck (A10)		Loamy Gle	eyed Mat	rix (F2)					
	d Below Dark Surface	e (A11)	x Depleted N	/latrix (F	3)		_			
	ark Surface (A12)		Redox Dar		` '			cators of hydroph		
	fucky Mineral (S1)		Depleted [		` ′			wetland hydrology		ent,
5 cm Mu	icky Peat or Peat (S3	3)	Redox Dep	pression	s (F8)		ι	unless disturbed o	or problematic.	
	Layer (if observed):									
Type:			_							
Depth (ir	nches):		_				Hydric Soil Pre	esent?	Yes X	No
Remarks:				,			NDOO EL LIL E			0.0045
	m is revised from Mi ://www.nrcs.usda.gov							ators of Hydric S	oils, Version 7.	0, 2015
Litata. (ittp.	,// www.mcs.usua.gov	//IIItOIIIOUT C	DE_DOOOINEIVIO	/11103172	-pz_0012	_00.d00/	<b>'</b> )			
HYDROLO	OGY									
	drology Indicators:									
	cators (minimum of c		ed: check all that	apply)			Seco	ondary Indicators	(minimum of tw	o required)
	Water (A1)	,	X Water-Sta		ves (B9)			Surface Soil Crac	•	<del>/</del>
High Wa	ater Table (A2)		Aquatic Fa					Drainage Patterns	, ,	
Saturation	on (A3)		True Aqua	tic Plant	s (B14)		<u> </u>	Dry-Season Wate	er Table (C2)	
Water M	larks (B1)		Hydrogen	Sulfide (	Odor (C1	)		Crayfish Burrows		
Sedimer	nt Deposits (B2)		Oxidized R	Rhizosph	eres on I	_iving R	oots (C3)	Saturation Visible	on Aerial Imag	ery (C9)
	oosits (B3)		Presence	of Reduc	ced Iron (	(C4)		Stunted or Stress	, ,	
`	at or Crust (B4)		Recent Iro			lled Soil		Geomorphic Posi		
	oosits (B5)	<b></b>	Thin Muck				<u>X</u> F	FAC-Neutral Test	(D5)	
	on Visible on Aerial I	0 , (	<i></i>		, ,					
` _ '	/ Vegetated Concave	Surrace (B	8)Other (Exp	plain in R	emarks)		1			
Field Obser		_	NI-	D = = 11= //						
Surface Wat				Depth (i	_					
Water Table Saturation P		es			nches): _ nches):		Wotland Hyd	rology Present?	Vos Y	No
	pillary fringe)	es	No	Deptii (i			Welland Hyd	rology Fresent:	Yes_X_	No
	corded Data (stream	dande mo	nitoring well aeria	Inhotos	previou	s inspec	tions) if available			
20001100 110	Julia Pala (oli odili	. gaago, 1110		p.10100	, p.oviou	- mopoc	, ii avallable	•		
Remarks:										
Precipitation	provides hydrology.									
ı										

Project/Site: Anguin-Brie 138kV R0/Brie Substation		City/Cou	ınty: Licking		Sampling Da	ite: <u>5/11</u>	/2022
Applicant/Owner: AEP				State: OH	Sampling Po	int: w-cM	/IS-005-UPL
Investigator(s): CMS, HA		Section,	Township, Ra	nge: S25 2N 15W			
Landform (hillside, terrace, etc.): Flat			Local relief (d	concave, convex, nor	ne): concave		
Slope (%):4 Lat: _40.057158		Long:	-82.751333		Datum: NAD 8	3	
Soil Map Unit Name: BeA: Bennington silt loam, 0 to	2 percent slop	es		NWI cl	assification: NA		
Are climatic / hydrologic conditions on the site typical	for this time o	f year?	Yes x	No (If no	, explain in Remark	s.)	
Are Vegetation, Soil, or Hydrology	significantly of	disturbed?	Are "Normal C	Circumstances" prese	ent? Yes X	No	_
Are Vegetation, Soil, or Hydrology	_naturally prob	olematic? (	(If needed, ex	plain any answers in	Remarks.)		
SUMMARY OF FINDINGS – Attach site n	nap showir	ng samplin	ng point lo	cations, transed	cts, important f	eatures	, etc.
Hydrophytic Vegetation Present? Yes I	No X	Is the	Sampled A	rea			
Hydric Soil Present? Yes I	No X	withi	n a Wetland	? Yes	No <u>X</u>		
Wetland Hydrology Present? Yes X	No						
Remarks: This sample point is representaive of the upland fore  VEGETATION — Use scientific names of plants are selected as the selected are selected.		that surround	ds W-CMS-00	95, W-CMS-006 and	W-CMS-007.		
VEGETATION – Ose scientific flames of pr	Absolute	Dominant	Indicator				
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test	worksheet:		
1. Acer saccharum	70	Yes	FACU	Number of Domin		0	(4)
Carpinus caroliniana     Prunus serotina	20	No No	FAC FACU	Are OBL, FACW,	_	2	_ (A)
4.		110	TACO	Total Number of I Across All Strata:	Jominant Species	4	(B)
5.				Percent of Domin	ant Species That		<b>-</b> ` ′
	110	=Total Cover		Are OBL, FACW,		50.0%	_ (A/B)
Sapling/Shrub Stratum (Plot size: 15'	_)						
1. Rosa multiflora	5	Yes	FACU	Prevalence Index		المناملة المناط	
2. 3.				Total % Cove OBL species	0 x1=	Itiply by: 0	_
4.				FACW species	60 x 2 =	120	_
5.				FAC species	20 x 3 =	60	_
	5	=Total Cover		FACU species	95 x 4 =	380	_
Herb Stratum (Plot size: 5')				UPL species	0 x 5 =	0	_
1. Impatiens capensis	40	Yes	FACW	Column Totals:	175 (A)	560	_ (B)
Euthamia graminifolia     3.		Yes	FACW	Prevalence Ind	lex = B/A =	3.20	_
4.				Hydrophytic Veg	etation Indicators	<u> </u>	
5.					t for Hydrophytic Ve		
6.					e Test is >50%	•	
7.				3 - Prevalenc	e Index is ≤3.0 <sup>1</sup>		
8					gical Adaptations <sup>1</sup> (F		
9.					marks or on a sepa		•
10	60	Total Cayor			Hydrophytic Vegetat		
Woody Vine Stratum (Plot size: 30'		=Total Cover			ric soil and wetland s disturbed or probl		' must
1.				Hydrophytic			
2		Total Cover		Vegetation	/oo Na	~	
Demontor (Industrial Lateral		=Total Cover		Present?	/esNo_		
Remarks: (Include photo numbers here or on a sep A preponderance of hydrophytic vegetation is not pr	,						

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SOIL Sampling Point: -CMS-005-UI

Profile Desc Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Text	ure	Remarks	
0-9	10YR 4/2	100		'						
9-14	10YR 6/4	100					•			
<u> </u>								1 1		
							-			
							-			
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion, RM	=Reduced Matrix, I	√S=Mas	ked Sand	d Grains		<sup>2</sup> Location: PL=	Pore Lining, M=Matr	X.
Hydric Soil	Indicators:								Problematic Hydric	Soils <sup>3</sup> :
Histosol	. ,		Sandy Gle	•	. ,				rie Redox (A16)	
	ipedon (A2)		Sandy Re						anese Masses (F12)	
Black His	` '		Stripped N		6)				t Material (F21)	
	n Sulfide (A4)		Dark Surfa						ow Dark Surface (F22	2)
	Layers (A5)		Loamy Mu	-				Other (Exp	lain in Remarks)	
2 cm Mu		(8.4.4)	Loamy Gle							
	Below Dark Surface	(A11)	Depleted I	`	,			31		
	rk Surface (A12)		Redox Da		` '				ydrophytic vegetation	
	ucky Mineral (S1) cky Peat or Peat (S3		Depleted I		` '	1		-	drology must be presturbed or problematic	
		,	Redux De	pression	5 (1 0)	ı		uriless dist	urbed or problematic	
_	_ayer (if observed):									
Type: _										
Danth (in							Hardela Ca	:I D	Vaa	Na V
Depth (in Remarks: The soil prof	nches):	criteria fo	r any hydric soil inc	dicators.			Hydric So	il Present?	Yes	No X
Remarks: The soil prof	ile does not meet the	criteria fo	r any hydric soil ind	dicators.			Hydric So	il Present?	Yes	No X
Remarks:	ile does not meet the	criteria fo	r any hydric soil ind	dicators.			Hydric So	il Present?	Yes	No X
Remarks: The soil prof	GY drology Indicators:						Hydric So			
Remarks: The soil prof  HYDROLO  Wetland Hy  Primary India	GY drology Indicators:		ired; check all that	apply)			Hydric So	Secondary Indi	icators (minimum of t	
Remarks: The soil prof  HYDROLO  Wetland Hyd  Primary India  Surface	oGY drology Indicators: cators (minimum of o		ired; check all that X Water-Sta	apply) ined Lea	, ,		Hydric So	Secondary Indi	icators (minimum of to	
Remarks: The soil prof  HYDROLO  Wetland Hy  Primary India  Surface  High Wa	drology Indicators: cators (minimum of o		ired; check all that  X Water-Sta Aquatic Fa	apply) ined Lea auna (B1	3)		Hydric So	Secondary Indi Surface So Drainage F	icators (minimum of to bil Cracks (B6) Patterns (B10)	
Remarks: The soil prof  HYDROLO  Wetland Hy  Primary India  Surface  High Wa  Saturatio	drology Indicators: cators (minimum of owater (A1) ter Table (A2) on (A3)		ired; check all that  X Water-Sta Aquatic Fa	apply) ined Lea auna (B1 atic Plant	3) s (B14)		Hydric So	Secondary Indi Surface So Drainage F Dry-Seaso	icators (minimum of t bil Cracks (B6) Patterns (B10) n Water Table (C2)	
Remarks: The soil prof  HYDROLO  Wetland Hyu  Primary India  Surface  High Wa  Saturatic  Water M	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1)		ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen	apply) ined Lea auna (B1 ttic Plant Sulfide (	3) s (B14) Odor (C1			Secondary Indi Surface So Drainage F Dry-Seaso Crayfish B	icators (minimum of t bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8)	wo required)
Remarks: The soil prof  HYDROLO  Wetland Hyde  Primary India  Surface  High Wa  Saturatio  Water M  Sedimen	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)		ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	apply) ined Lea auna (B1 titic Plant Sulfide ( Rhizosph	3) s (B14) Odor (C1) neres on I	_iving R		Secondary Indi Surface So Drainage F Dry-Seaso Crayfish Br Saturation	icators (minimum of tobil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Ima	wo required)
Remarks: The soil prof  HYDROLO  Wetland Hyde  Surface  High Water M  Sediment  Drift Dep	oGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) osits (B3)		ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	apply) ined Lea auna (B1 stitc Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1) neres on I ced Iron (	_iving Ro (C4)	pots (C3)	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) Incurrows (C8) Visible on Aerial Ima Stressed Plants (D1)	wo required) gery (C9)
Remarks: The soil prof  Wetland Hyd Primary India Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3) t or Crust (B4)		ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Redu on Redu on Redu	3) cs (B14) Odor (C1 neres on I ced Iron ( ction in Ti	_iving Ro (C4)	pots (C3)	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) In Water Table (C2) In Water Table (C2) Urrows (C8) Visible on Aerial Ima Stressed Plants (D1) ic Position (D2)	wo required) gery (C9)
Remarks: The soil prof  HYDROLO  Wetland Hyd  Primary Indio  Surface  High Wa  Saturatio  Water M  Sedimen  Drift Dep  Algal Ma  Iron Dep	oGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) osits (B3)	ne is requ	ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) cs (B14) Odor (C1) neres on I ced Iron ( ction in Ti e (C7)	_iving Ro (C4)	pots (C3)	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) Incurrows (C8) Visible on Aerial Ima Stressed Plants (D1)	wo required) gery (C9)
Remarks: The soil prof  HYDROLO  Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio	drology Indicators: cators (minimum of owater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial In	ne is requ	ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc s Surface Well Dat	3) ss (B14) Odor (C1) neres on I ced Iron ( ction in Ti e (C7) ta (D9)	_iving Ro (C4)	pots (C3)	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) In Water Table (C2) In Water Table (C2) In Water Table (C2) Urrows (C8) Visible on Aerial Ima Stressed Plants (D1) ic Position (D2)	wo required) gery (C9)
Remarks: The soil prof  Wetland Hye Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Ir Vegetated Concave	ne is requ	ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc s Surface Well Dat	3) ss (B14) Odor (C1) neres on I ced Iron ( ction in Ti e (C7) ta (D9)	_iving Ro (C4)	pots (C3)	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) In Water Table (C2) In Water Table (C2) In Water Table (C2) Urrows (C8) Visible on Aerial Ima Stressed Plants (D1) ic Position (D2)	wo required) gery (C9)
Remarks: The soil prof  HYDROLO  Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio	drology Indicators: cators (minimum of of of of water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) oosits (B3) t or Crust (B4) oosits (B5) on Visible on Aerial In Vegetated Concave	ne is requ magery (B' Surface (I	ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc s Surface Well Dat	3) ss (B14) Odor (C1 neres on I ced Iron ( ction in Ti e (C7) ta (D9) Remarks)	_iving Ro (C4)	pots (C3)	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) In Water Table (C2) In Water Table (C2) In Water Table (C2) Urrows (C8) Visible on Aerial Ima Stressed Plants (D1) ic Position (D2)	wo required) gery (C9)
Remarks: The soil prof  Wetland Hyd Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely	drology Indicators: cators (minimum of orwater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial In Vegetated Concave vations: er Present? Ye	ne is requ magery (B' Surface (I	ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Redu on Reduc s Surface Well Dat blain in F	3) is (B14) Odor (C1 heres on I ced Iron ( ction in Ti e (C7) ia (D9) Remarks)	_iving Ro (C4)	pots (C3)	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) In Water Table (C2) In Water Table (C2) In Water Table (C2) Urrows (C8) Visible on Aerial Ima Stressed Plants (D1) ic Position (D2)	wo required) gery (C9)
Remarks: The soil prof  HYDROLO  Wetland Hyde  Primary Indice  Surface  High Water M  Sedimen  Drift Dep  Algal Ma  Iron Dep  Inundatice  Sparsely  Field Obser  Surface Water	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Ir Vegetated Concave vations: er Present? Ye Present? Ye	ne is requ magery (B' Surface (I s	ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 stic Plant Sulfide ( Rhizosph of Reduc on Reduc s Surface Well Dat	3) Is (B14) Odor (C1) Ineres on I Iced Iron (I Icetion in Ti Ice (C7) Ita (D9) Remarks) Inches): Inches):	_iving Ro (C4)	oots (C3) s (C6)	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) Incurrows (C8) Visible on Aerial Ima Stressed Plants (D1) ic Position (D2) ral Test (D5)	wo required) gery (C9)
Remarks: The soil prof  Wetland Hyd Primary India Surface High Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatia Sparsely Field Obser Surface Water Water Table	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Ir Vegetated Concave vations: er Present? Present? Ye resent? Ye	ne is requ magery (B' Surface (I s	ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat blain in F	3) Is (B14) Odor (C1) Ineres on I Iced Iron (I Icetion in Ti Ice (C7) Ita (D9) Remarks) Inches): Inches):	_iving Ro (C4)	oots (C3) s (C6)	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neutr	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) Incurrows (C8) Visible on Aerial Ima Stressed Plants (D1) ic Position (D2) ral Test (D5)	wo required)
Remarks: The soil prof  Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely  Field Obser Surface Wat Water Table Saturation P (includes cap	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Ir Vegetated Concave vations: er Present? Present? Ye resent? Ye	ne is requ magery (B' Surface (I s  s	ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat blain in F Depth (i Depth (i	3) Is (B14) Odor (C1) Ineres on I Ced Iron ( Ction in Ti E (C7) Ita (D9) Remarks) Inches): Inches):	Living Ro	oots (C3) s (C6) Wetland	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neutr	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) Incurrows (C8) Visible on Aerial Ima Stressed Plants (D1) ic Position (D2) ral Test (D5)	wo required
Remarks: The soil prof  Wetland Hye Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap Describe Re	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) osits (B3) tt or Crust (B4) osits (B5) on Visible on Aerial Ir Vegetated Concave vations: er Present? Present? Ye present? Ye present? Ye poillary fringe)	ne is requ magery (B' Surface (I s  s	ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat blain in F Depth (i Depth (i	3) Is (B14) Odor (C1) Ineres on I Ced Iron ( Ction in Ti E (C7) Ita (D9) Remarks) Inches): Inches):	Living Ro	oots (C3) s (C6) Wetland	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neutr	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) Incurrows (C8) Visible on Aerial Ima Stressed Plants (D1) ic Position (D2) ral Test (D5)	wo required
Remarks: The soil prof  Wetland Hye Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes car Describe Re	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) osits (B3) tt or Crust (B4) osits (B5) on Visible on Aerial Ir Vegetated Concave vations: er Present? Present? Ye present? Ye present? Ye poillary fringe)	ne is required in the second s	ired; check all that  X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X No X Onitoring well, aeria	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat blain in F Depth (i Depth (i	3) Is (B14) Odor (C1) Ineres on I Ced Iron ( Ction in Ti E (C7) Ita (D9) Remarks) Inches): Inches):	Living Ro	oots (C3) s (C6) Wetland	Secondary Indi Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neutr	icators (minimum of to bil Cracks (B6) Patterns (B10) In Water Table (C2) Incurrows (C8) Visible on Aerial Ima Stressed Plants (D1) ic Position (D2) ral Test (D5)	wo required

Project/Site: Anguin-Brie 138kV R0		City/Cou	ınty: Licking			Sampling Da	te: <u>5/11</u>	/2022
Applicant/Owner: AEP				State:	ОН	Sampling Poi	nt: W-C	CMS-006
Investigator(s): CMS, HA		Section, 7	Township, Ra	nge: S25 2N	15W			
Landform (hillside, terrace, etc.): Flat			Local relief (d	concave, convex	ς, none): <u>cc</u>	ncave		
Slope (%): 1 Lat: 40.057109		Long:	-82.751783		D	atum: NAD 8	3	
Soil Map Unit Name: BeA: Bennington silt loam, 0 to 2	percent slop	es		N	VI classific	ation: NA		
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes x	No	(If no, expla	in in Remark	s.)	
Are Vegetation, Soil, or Hydrologys	significantly o	listurbed?	Are "Normal C	Circumstances"	present?	Yes X	No	
Are Vegetation, Soil, or Hydrologyr			(If needed, ex	plain any answe	ers in Rema	arks.)		_
SUMMARY OF FINDINGS – Attach site ma			ng point lo	cations, trai	nsects, i	mportant f	eatures	, etc.
Hydrophytic Vegetation Present? Yes X No	)	Is the	e Sampled A	rea				
		withi	n a Wetland	? Ye	es X	No		
Wetland Hydrology Present? Yes X No								
Remarks: This sample point is representative of the PFO portion	of W-CMS-	006 a PFO w	etland. The w	etland dominate	ed by box e	lder silver m	anle redu	manle
American elm, spice bush, spotted touch-me-not and		000 a 1 1 O W	chana. The w	otiana dominat	, a by box c	idor, olivor me	лріо, тоа т	паріс,
<b>VEGETATION</b> – Use scientific names of pla	nts.							
Tree Stratum (Plot size: 30')	Absolute	Dominant Species?	Indicator	Dominance	Tost work	shoot:		
Tree Stratum (Plot size: 30')  1. Acer rubrum	% Cover 60	Species? Yes	Status FAC	Number of D				
Acer saccharinum	40	Yes	FACW	Are OBL, FA			6	(A)
3.				Total Numbe		_		<b>-</b> ` ′
4.				Across All St			6	_(B)
5.				Percent of D	ominant Sp	ecies That		_
	100 :	=Total Cover		Are OBL, FA	CW, or FA	C: _	100.0%	_ (A/B)
Sapling/Shrub Stratum (Plot size: 15')								
1. Ulmus americana	20	Yes	FACW	Prevalence			Calabana	
2. <u>Lindera benzoin</u> 3.	10	Yes	FACW		Cover of:		tiply by: 0	-
4.				OBL species FACW speci		x1=_ x2=	160	_
5.				FAC species		x3=	180	-
	30 :	=Total Cover		FACU specie		x 4 =	0	-
Herb Stratum (Plot size: 5' )				UPL species		x 5 =	0	_
1. Impatiens capensis	5	Yes	FACW	Column Tota	ls: 140	(A)	340	(B)
2. Euthamia graminifolia	5	Yes	FACW	Prevalenc	e Index = I	B/A =	2.43	_
3								
4					_	n Indicators:		
5						ydrophytic Ve	getation	
6.				X 2 - Domi X 3 - Preva				
7 8.						x is ≤3.0 daptations¹ (F	Provide su	nnorting
9.					-	or on a separ		
10.				Problem	atic Hydror	hytic Vegetat	ion¹ (Exp!	ain)
	10 :	=Total Cover			-	and wetland		
Woody Vine Stratum (Plot size: 30')						rbed or proble		
1				Hydrophytic	;			
2				Vegetation				
		=Total Cover		Present?	Yes	<u>X</u> No_		
Remarks: (Include photo numbers here or on a separ								
A preponderance of hydrophytic vegetation is present								

	cription: (Describe	to the dept				tor or o	confirm the absence	e of indicators.)			
Depth	Matrix			x Featur		. 2					
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0-4	10YR 5/1	100					Loamy/Clayey				
4-10	10YR 4/1	100					Loamy/Clayey				
10-16	10YR 5/1	70	10YR 5/8	30	С	М	Loamy/Clayey	Prominent redox concentrations			
			_				•				
							•				
							•	-			
1 <sub>Type: C-C</sub>	oncontration D-Dan	otion BM	Poduced Matrix N		kod Sono	Croins	21 postis	n: PL=Pore Lining, M=Matrix.			
Hydric Soil	oncentration, D=Depl	elion, Kivi=	Reduced Mairix, N	/IS=IVIAS	keu Sanc	Giailis		ors for Problematic Hydric Soils <sup>3</sup> :			
Histosol			Sandy Gle	ved Mat	rix (S4)			ast Prairie Redox (A16)			
	pipedon (A2)		Sandy Red	-				n-Manganese Masses (F12)			
	stic (A3)		Stripped M					d Parent Material (F21)			
	n Sulfide (A4)		Dark Surfa	,	,			ry Shallow Dark Surface (F22)			
	d Layers (A5)		Loamy Mu		eral (F1)			ner (Explain in Remarks)			
	ıck (A10)		Loamy Gle	-							
Depleted	d Below Dark Surface	(A11)	x Depleted N	/atrix (F	3)						
Thick Da	ark Surface (A12)		Redox Dar	k Surfac	e (F6)		<sup>3</sup> Indicat	ors of hydrophytic vegetation and			
Sandy Mucky Mineral (S1)  Depleted Dark Surface (F7)							wetland hydrology must be present,				
5 cm Mucky Peat or Peat (S3) Redox Depressions (F8)							unless disturbed or problematic.				
Restrictive	Layer (if observed):										
Type:											
Depth (ii	nches):		<u></u>				Hydric Soil Prese	ent? Yes X No			
Remarks:											
The soil prof	ile meets the criteria	for having	a depleted matrix								
HYDROLO	OGY										
	drology Indicators:										
_	cators (minimum of o	ne is requir	ed check all that	apply)			Second	dary Indicators (minimum of two required)			
	Water (A1)		X Water-Sta		ives (B9)			rface Soil Cracks (B6)			
	ater Table (A2)		Aquatic Fa		` '			ainage Patterns (B10)			
X Saturation	` '		True Aqua	tic Plant	s (B14)		 Dry	y-Season Water Table (C2)			
	larks (B1)		Hydrogen	Sulfide (	Odor (C1)	)	Cra	ayfish Burrows (C8)			
Sedimer	nt Deposits (B2)		Oxidized R	Rhizosph	eres on L	iving R	oots (C3) Sat	turation Visible on Aerial Imagery (C9)			
Drift Dep	oosits (B3)		Presence	of Reduc	ced Iron (	C4)		inted or Stressed Plants (D1)			
	at or Crust (B4)		Recent Iro			led Soi		omorphic Position (D2)			
· ·	oosits (B5)		Thin Muck				<u>X</u> FA	C-Neutral Test (D5)			
	on Visible on Aerial Ir	0 , .	<i></i>								
	Vegetated Concave	Surface (B	8)Other (Exp	lain in R	Remarks)		1				
Field Obser				D 41 (*)							
Surface Wat				Depth (i							
Water Table				Depth (i		0	Matlemal Hudnel	James Directority Voc. V No.			
Saturation P		s_X_	No	Depth (i	nches)	0	Wetland Hydrol	ogy Present? Yes X No			
	pillary fringe) corded Data (stream	naune mo	nitoring well serie	l photos	previous	sinsner	tions) if available:				
Posonine IVE	Jordon Data (Strediti	gaage, 1110	omig won, aena	. p. 10103	, provious	, ii ishet	Alono, il avallable.				
Remarks:											
Precipitation	provides hydrology.										
i											

Project/Site: Anguin-Brie 138kV R0		City/Cou	ınty: Licking		Sa	ampling Date:	5/11/	/2022
Applicant/Owner: AEP				State:	OH Sa	ampling Point:	: <u>W-C</u>	MS-007
Investigator(s): CMS, HA		Section, 7	Γownship, Ra	nge: S25 2N 1	5W			
Landform (hillside, terrace, etc.): Flat			Local relief (d	concave, convex,	none): cond	ave		
Slope (%):1		Long:	82.750953		Datu	ım: <u>NAD 83</u>		
Soil Map Unit Name: BeA: Bennington silt loam, 0 to	2 percent slop	es		NW	I classificati	on: NA		
Are climatic / hydrologic conditions on the site typical	for this time o	f year?	Yes x	No (If	no, explain	in Remarks.)		
Are Vegetation, Soil, or Hydrology			Are "Normal C	Circumstances" p			No	
Are Vegetation, Soil, or Hydrology	<del>_</del> '			plain any answer				_
SUMMARY OF FINDINGS – Attach site n	<del>_</del>		g point lo	cations, tran	sects, im	portant fea	atures	, etc.
Hydrophytic Vegetation Present? Yes X	No	Is the	Sampled A	rea				
	No O		n a Wetland		<b>x</b>	No		
Wetland Hydrology Present? Yes X	No							
Remarks: This sample point is representative of W-CMS-007 a	a PFO wetland							
VEGETATION – Use scientific names of pl	lants.							
·	Absolute	Dominant	Indicator					
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance T				
Acer rubrum     Ulmus americana	<u>45</u> 25	Yes Yes	FACW	Number of Do Are OBL, FAC		cies That	6	(A)
3.		163	TACV					_ (^)
4.				Total Number Across All Stra		Species	6	(B)
5.				Percent of Do	minant Spec	ies That		<b>-</b> ` ′
	70 :	=Total Cover		Are OBL, FAC			00.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15'	_)							_
Ulmus americana	25	Yes	FACW	Prevalence Ir				
2. Lindera benzoin	25	Yes	FACW	Total % 0		Multip		_
3.				OBL species	0	_ x1=	0	-
4 5.				FACW species FAC species	s 90 47	_ x 2 = x 3 =	180 141	-
J	50	=Total Cover		FACU species		_ x4=	0	-
Herb Stratum (Plot size: 5' )				UPL species	0	x 5 =	0	_
Phalaris arundinacea	10	Yes	FACW	Column Totals	s: 137	(A)	321	(B)
2. Euthamia graminifolia	5	Yes	FACW	Prevalence	Index = B/A	A = 2.3	34	_
3. Acer rubrum	2	No	FAC					
4				Hydrophytic \	_			
5					-	rophytic Vege	etation	
6.				X 2 - Domin X 3 - Preval				
7. 8.						s ≤s.⊍ ptations¹ (Pro	wida suu	nnortino
9.						on a separate		
10.				Problema	tic Hydrophy	rtic Vegetatior	n¹ (Expl:	ain)
	17	=Total Cover		<sup>1</sup> Indicators of I		_		
Woody Vine Stratum (Plot size: 30'	_)			be present, un	less disturb	ed or problem	ıatic.	
1				Hydrophytic				
2				Vegetation				
		=Total Cover		Present?	Yes X	No		
Remarks: (Include photo numbers here or on a sep								
A preponderance of hydrophytic vegetation is preser	nt.							

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		o the dept		ator or o	confirm the absence	of indicators.)		
Depth	Matrix			x Featur		. 2		
(inches)	Color (moist)	<u> </u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	10YR 5/1	70	7.5YR 4/6	30	С	m	Loamy/Clayey	Prominent redox concentrations
2-8	10YR 6/1	60	10YR 6/6	40	С	m	Loamy/Clayey	Prominent redox concentrations
							-	
							,	
<sup>1</sup> Type: C=C	concentration, D=Depl	etion RM-	Reduced Matrix I	M-PN	ked Sand		<sup>2</sup> Locatio	n: PL=Pore Lining, M=Matrix.
Hydric Soil		Ction, rtivi=	reduced Matrix, i	VIO-IVIASI	nea Garie	J Grains		ors for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Gle		st Prairie Redox (A16)			
	pipedon (A2)		Sandy Re		` ,			-Manganese Masses (F12)
Black Hi	istic (A3)		Stripped N	/latrix (Se	6)		Red	Parent Material (F21)
Hydroge	Hydrogen Sulfide (A4)  Dark Surface (S7)							Shallow Dark Surface (F22)
Stratified	d Layers (A5)		Loamy Mu	icky Mine	eral (F1)		Othe	er (Explain in Remarks)
	uck (A10)		Loamy Gle	eyed Mat	rix (F2)			
	d Below Dark Surface	(A11)	x Depleted I			2		
Thick Dark Surface (A12) Redox Dark Surface (F6)								ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) 5 cm Mucky Peat or Peat (S3) Redox Depressions (F8)								and hydrology must be present,
		)	Redox De	pression	S (F8)		unie	ss disturbed or problematic.
	Layer (if observed):							
Type:			<del></del>				Undria Cail Dasses	Van V. Na
Depth (ii	ncnes):		<del>_</del>				Hydric Soil Preser	nt? Yes X No
Remarks:	file meets the criteria	for having a	doploted matrix					
The son pro	me meets the chteria	ioi riaviriy a	i depieted matrix.					
HYDROLO	OGY							
Wetland Hy	drology Indicators:							
	cators (minimum of o	ne is requir	ed; check all that	apply)			Seconda	ary Indicators (minimum of two required)
X Surface	Water (A1)		X Water-Sta	ined Lea	ves (B9)		Surf	ace Soil Cracks (B6)
X High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		Drai	nage Patterns (B10)
X Saturation	on (A3)		True Aqua				Dry-	Season Water Table (C2)
	larks (B1)		Hydrogen					fish Burrows (C8)
	nt Deposits (B2)		Oxidized F			_		uration Visible on Aerial Imagery (C9)
	posits (B3)		Presence					nted or Stressed Plants (D1)
	at or Crust (B4) posits (B5)		Recent Iro			lied Soil		morphic Position (D2) -Neutral Test (D5)
· ·	on Visible on Aerial Ir	nagery (B7)			. ,		<u> </u>	-Neutral Test (D3)
	y Vegetated Concave	0 , ,						
Field Obser								
	ter Present? Ye	s X	No	Depth (i	nches):	0.1		
Water Table				Depth (i	· -	0		
Saturation P	Present? Ye	s X	No	Depth (i	_	0	Wetland Hydrolo	ogy Present? Yes X No
(includes ca	pillary fringe)							
Describe Re	ecorded Data (stream	gauge, mo	nitoring well, aeria	al photos	, previou	s inspec	ctions), if available:	
<u> </u>								
Remarks:	providos budas la ac							
riecipitation	provides hydrology.							

Project/Site: Brie Substation		City/Cou	ınty: Licking		Sampling Da	te: <u>5/11</u>	/2022
Applicant/Owner: AEP				State: OH	Sampling Poi	int: w-cM	/IS-008 PFC
Investigator(s): CMS, HA		Section,	Township, Ra	nge: S25 2N 15W			
Landform (hillside, terrace, etc.): Flat			Local relief (d	concave, convex, none)	: concave		
Slope (%): 4 Lat: 40.058155		Long:	-82.745589		Datum: NAD 8	3	
Soil Map Unit Name: Cen1C2: Centerburg silt loam,	6 to 12 percen	t slopes, erod	led	NWI class	sification: NA		
Are climatic / hydrologic conditions on the site typical	for this time o	f year?	Yes x	No (If no, e	xplain in Remark	s.)	
Are Vegetation, Soil, or Hydrology	significantly of	listurbed?	Are "Normal (	Circumstances" present			
Are Vegetation, Soil, or Hydrology	_		(If needed, ex	plain any answers in R	emarks.)		_
SUMMARY OF FINDINGS – Attach site n						eatures	, etc.
Hydrophytic Vegetation Present? Yes X	No	Is the	e Sampled A	rea			
Hydric Soil Present? Yes X	No		n a Wetland		No		
	No						
Remarks: This sample point is representative of the PFO portivillow, fowl blue grass, spotted touch-me-not, bulbo				complex. This forested v	vetland is domina	ated by bla	ack
VEGETATION – Use scientific names of p		and Canadian	i nonewort.				
vegetation – ose scientific flames of p	Absolute	Dominant	Indicator	1			
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test w	orksheet:		
Salix nigra 2.	65	Yes	OBL	Number of Dominan Are OBL, FACW, or	•	5	(A)
3.				Total Number of Do	minant Species		_
4				Across All Strata:	_	5	_ (B)
5		Tatal Cause		Percent of Dominan	•	400.00/	(A /D)
Sapling/Shrub Stratum (Plot size: 15'	65	=Total Cover		Are OBL, FACW, or	FAC:	100.0%	<b>-</b> (A/B)
1.	_'			Prevalence Index v	vorksheet:		
2.				Total % Cover		tiply by:	
3.				OBL species	85 x 1 =	85	_
4.				FACW species	60 x 2 =	120	_
5.				· —	20 x 3 =	60	_
		=Total Cover		FACU species	3 x 4 =	12	_
Herb Stratum (Plot size: 5')				UPL species	0 x 5 =	0	_
1. Poa palustris	40	Yes	FACW	Column Totals:		277	_ (B)
2. Impatiens capensis	20	Yes	FACW	Prevalence Index	= B/A =	1.65	_
3. Cryptotaenia canadensis	20	Yes	FAC				
4. Cardamine bulbosa	20	Yes	OBL	Hydrophytic Vegeta			
5. Allium tricoccum	3	No	FACU		or Hydrophytic Ve	getation	
6.				X 2 - Dominance			
7				X 3 - Prevalence I			
8.				· —	al Adaptations <sup>1</sup> (F Irks or on a separ		
9 10.					drophytic Vegetat		•
10	103	Total Cover		<sup>1</sup> Indicators of hydric			
Woody Vine Stratum (Plot size: 30'	)			be present, unless d		, ,,	must
1.	<u> </u>			Hydrophytic	,	•	
2.				Vegetation			
		Total Cover		_	s <u>X</u> No_		
Remarks: (Include photo numbers here or on a sep	arate sheet.)						
A preponderance of hydrophytic vegeation is preser	nt.						

SOIL Sampling Point: -CMS-008 PF

	ription: (Describe	to the depth				ator or o	confirm the absen	ce of indicators	s.)	
Depth	Matrix			x Featur		. 2	_			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-10	10YR 4/1	80	7.5YR 4/4	20	<u>C</u>	PL/M	Loamy/Clayey	Promine	nt redox conce	ntrations
1Typo: C-C	oncentration, D=Depl	otion PM-E	Poducod Matrix N		kod San		<sup>2</sup> l oca	tion: PL=Pore L	ining M-Matrix	<del></del>
Hydric Soil		elion, Kivi=K	teduced Matrix, i	/IO=IVIAS	keu Sanc	Giailis		ators for Proble		
Histosol			Sandy Gle	ved Mat	rix (S4)			Coast Prairie Red	-	
	ipedon (A2)		Sandy Red		(- )			on-Manganese M		
Black His			Stripped M		6)			Red Parent Mater		
Hydroge	n Sulfide (A4)		Dark Surfa	ice (S7)				ery Shallow Darl	k Surface (F22)	)
Stratified	Layers (A5)		Loamy Mu	cky Mine	eral (F1)		<u> </u>	Other (Explain in I	Remarks)	
2 cm Mu	ck (A10)		Loamy Gle	eyed Mat	trix (F2)					
Depleted	Below Dark Surface	(A11)	_x_Depleted N	//atrix (F	3)					
	rk Surface (A12)		Redox Dai		` '			ators of hydroph		
	ucky Mineral (S1)		Depleted [			)		etland hydrology		ent,
5 cm Mu	cky Peat or Peat (S3	)	Redox De	pression	s (F8)		u	nless disturbed o	or problematic.	
Restrictive I	_ayer (if observed):									
Type:			_							
Depth (ir	nches):		_				Hydric Soil Pres	sent?	Yes	No
Remarks:										
The soil prof	le meets the criteria	for a deplete	ed matrix.							
HYDROLO	GY									
	drology Indicators:									
-	cators (minimum of o	ne is reauire	d: check all that	apply)			Secor	ndary Indicators	(minimum of tw	o required)
X Surface	•		X Water-Sta		ves (B9)			Surface Soil Crac		
	ter Table (A2)		Aquatic Fa					rainage Patterns		
X Saturation	n (A3)		True Aqua	tic Plant	s (B14)		<u> </u>	ry-Season Wate	r Table (C2)	
Water M	arks (B1)		Hydrogen	Sulfide (	Odor (C1	)	<u>X</u> C	rayfish Burrows	(C8)	
Sedimen	t Deposits (B2)		X Oxidized F	Rhizosph	eres on l	_iving R	oots (C3)S	Saturation Visible	on Aerial Imag	ery (C9)
	osits (B3)		Presence					stunted or Stress		
	t or Crust (B4)		Recent Iro			lled Soil		Seomorphic Posit		
	osits (B5)	(5-)	Thin Muck		, ,		<u>X</u> F	AC-Neutral Test	(D5)	
	on Visible on Aerial Ir		Gauge or \		` '					
	Vegetated Concave	Surface (B8	Other (Exp	nain in R	emarks)					
Field Obser		• V	No	Donth (i	nohoo\.	c				
Surface Wat				Depth (i	´ <del>-</del>	6				
Water Table Saturation P				Depth (i Depth (i	′ -	0	Wetland Hydr	ology Present?	Yes X	No
(includes car		3 <u> </u>		Deptii (i	_		Wetland Hydro	ology i resent:	163 <u>X</u>	
	corded Data (stream	gauge, mon	itoring well. aeria	l photos	, previou	s inspec	tions), if available:			
					.,,					
Remarks:										
stream feeds	into the wetland									

Project/Site: Brie Substation	City/County: Licking		Sampling Date:	5/11/2022
Applicant/Owner: AEP		State: OH	Sampling Point:	W-CMS-008 PUB
Investigator(s): CMS, HA	Section, Township, Ra	nge: S25 2N 15W		
Landform (hillside, terrace, etc.): Flat	Local relief (c	oncave, convex, none):	concave	
Slope (%):4 Lat: _40.058155	Long: <u>-82.745589</u>		Datum: NAD 83	
Soil Map Unit Name: Cen1C2: Centerburg silt loam, 6 to 12 per	cent slopes, eroded	NWI classi	fication: NA	
Are climatic / hydrologic conditions on the site typical for this time	ne of year? Yes x	No (If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologysignifican	tly disturbed? Are "Normal C	Circumstances" present?	Yes X No	· <u> </u>
Are Vegetation, Soil, or Hydrologynaturally	problematic? (If needed, ex	plain any answers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site map show	wing sampling point lo	cations, transects,	important feat	ures, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Ar	ea		
Hydric Soil Present? Yes X No	within a Wetland?		No	
Wetland Hydrology Present? Yes X No				
Remarks: This sample point is representative of the PUB portion of W-CI	VIS-008 a DEO/DLIB wetland or	omnley		
This sample point is representative of the FOD portion of W-OI	WS-000 a FF O/F OB Welland Co	лпрієх.		
VEGETATION – Use scientific names of plants.				
Absolu				
Tree Stratum (Plot size: 30' ) % Cov	er Species? Status	Dominance Test wo		
1		Number of Dominant Are OBL, FACW, or F	•	1 (A)
3.		Total Number of Dom		
4.		Across All Strata:	•	1 (B)
5.		Percent of Dominant		
	=Total Cover	Are OBL, FACW, or F	AC: 100	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15' )		Prevalence Index wo	arkahaati	
1		Total % Cover of		bv:
3.		OBL species (		0
4.		FACW species 5	x 2 =	10
5		FAC species (		0
Harl Obstance (Districts 51)	=Total Cover	FACU species (		0
Herb Stratum (Plot size: 5' )  1. Poa palustris 5	Yes FACW	UPL species Column Totals: 5		0 10 (B)
2.	TC3 TAOW	Prevalence Index	`	
3.				
4.		Hydrophytic Vegetat	ion Indicators:	
5			Hydrophytic Vegeta	ation
6		X 2 - Dominance Te		
7			Adaptations <sup>1</sup> (Provi	de supporting
9			s or on a separate	
10.		Problematic Hydr	ophytic Vegetation <sup>1</sup>	(Explain)
5_	=Total Cover	<sup>1</sup> Indicators of hydric s	•	• • • • • • • • • • • • • • • • • • • •
Woody Vine Stratum (Plot size: 30')		be present, unless dis	turbed or problemat	tic.
1		Hydrophytic		
2	=Total Cover	Vegetation Present? Yes	X No	
Remarks: (Include photo numbers here or on a separate shee		100		
A preponderance of hydrophytic vegeation is present.	··,			

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SOIL Sampling Point: -CMS-008 PL

Depth	ription: (Describe Matrix			x Featur					,	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
					<u> </u>		•			
								_		
								_		
<sup>1</sup> Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, N	/IS=Mas	ked Sand	d Grains	. <sup>2</sup> Loca	tion: PL=Pore L	ining, M=Matri	x.
Hydric Soil	Indicators:						Indic	ators for Proble	matic Hydric	Soils <sup>3</sup> :
Histosol			Sandy Gle					oast Prairie Red		
	ipedon (A2)		Sandy Red					on-Manganese N		
Black His	` '		Stripped M		6)			led Parent Mater	. ,	
	n Sulfide (A4)		Dark Surfa					ery Shallow Darl		2)
	Layers (A5)		Loamy Mu	•	, ,		<u>x</u> C	other (Explain in I	Remarks)	
2 cm Mu		(8.4.4)	Loamy Gle	-						
	Below Dark Surface	e (A11)	Depleted N	,	,		31			
	rk Surface (A12)		Redox Dar		` '			ators of hydroph		
	ucky Mineral (S1)	١,	Depleted D					retland hydrology nless disturbed o		
	cky Peat or Peat (S3	P)	Redox Dep	JIESSIUII	S (FO)	T	u	riiess disturbed t	or problematic.	•
	_ayer (if observed):									
Type:							Unadaia Cail Bas		Vaa	N.
Depth (ir	icnes):						Hydric Soil Pres	sent?	Yes	No
HYDROLO	GY									
Wetland Hyd	drology Indicators:									
Primary India	cators (minimum of c	ne is requi	red; check all that	apply)			Secon	ndary Indicators	(minimum of t	wo required)
X Surface	Water (A1)		X Water-Stai	ined Lea	ives (B9)		s	urface Soil Crac	ks (B6)	
	ter Table (A2)		Aquatic Fa	•	,			rainage Patterns	, ,	
X Saturation			True Aqua					ry-Season Wate		
	arks (B1)		Hydrogen					rayfish Burrows	` ,	
	t Deposits (B2)		Oxidized R			-	· · · —	aturation Visible		
	osits (B3)		Presence of			,		tunted or Stress		
	t or Crust (B4)		Recent Iro Thin Muck			lied Soli	` '	Seomorphic Posit	, ,	
	osits (B5) on Visible on Aerial I	mageny (R7			` '			AC-Neutral Test	(D3)	
	Vegetated Concave	0 , .	<i></i>							
Field Obser			ce. (27p							
Surface Wat		s X	No	Depth (i	nches):	10				
Water Table				Depth (i	· -	0				
Saturation P				Depth (i	′ –	0	Wetland Hydr	ology Present?	Yes X	No
(includes cap			<del></del>		′ –			0,		
	corded Data (stream	gauge, mo	onitoring well, aeria	l photos	, previou	s inspec	tions), if available:			
	· 									
Remarks:										
stream feeds	into the wetland									

Project/Site: Brie Substation		City/Cou	ınty: Licking		Sampling Da	te: <u>5/11</u>	/2022
Applicant/Owner: AEP				State: OH	Sampling Poi	int: w-cM	1S-008-UPL
Investigator(s): CMS, HA		Section, 7	Γownship, Ra	nge: S25 2N 15W			
Landform (hillside, terrace, etc.): Flat			Local relief (c	concave, convex, none	): concave		
Slope (%): 4 Lat: 40.057853		Long:	82.745607		Datum: DDNAI	D 83	
Soil Map Unit Name: Pe: Pewamo silty clay loam, low	carbonate till	l, 0 to 2 perce	nt slopes	NWI clas	sification: NA		
Are climatic / hydrologic conditions on the site typical f	for this time o	of year?	Yes x	No (If no, e	explain in Remarks	s.)	
Are Vegetation, Soil, or Hydrology	significantly of			Circumstances" presen	t? Yes X	No	
Are Vegetation, Soil, or Hydrology			(If needed, ex	plain any answers in F	Remarks.)		_
SUMMARY OF FINDINGS – Attach site m			g point lo	cations, transect	s, important f	eatures	, etc.
Hydrophytic Vegetation Present? Yes N	o X	Is the	Sampled A	rea			
	o X		n a Wetland?		NoX		
Wetland Hydrology Present? Yes N	o <u>X</u>						
Remarks: This sample point is representative of the upland area		und W-CMS-0	08. The samp	ole point consissts of a	forested upland o	community	<b>y</b> .
VEGETATION – Use scientific names of pla	Absolute	Dominant	Indicator	Γ			
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test w	orksheet:		
Prunus serotina 2.	30	Yes	FACU	Number of Domina Are OBL, FACW, o	•	2	(A)
3.				Total Number of Do	_		_('')
4.				Across All Strata:	_	4	_(B)
5.				Percent of Dominar	nt Species That		_
	30	=Total Cover		Are OBL, FACW, o	r FAC:	50.0%	_ (A/B)
Sapling/Shrub Stratum (Plot size: 15'	)		E4.011				
1. Rosa multiflora 2.	15	Yes	FACU	Prevalence Index  Total % Cover		tiply by:	
3.				OBL species	5 x 1 =	5	-
4.				FACW species	32 x 2 =	64	_
5.				FAC species	20 x 3 =	60	_
	15	=Total Cover		FACU species	47 x 4 =	188	_
Herb Stratum (Plot size: 5' )				UPL species	0 x 5 =	0	_
1. Poa palustris	20	Yes	FACW	Column Totals:	104 (A)	317	(B)
2. Alliaria petiolata	20	Yes	FAC	Prevalence Inde	x = B/A =	3.05	_
3. Impatiens capensis	10	No	FACW				
4. Cardamine bulbosa	5	No	OBL	Hydrophytic Veget	ation Indicators:	:	
5. Rubus idaeus	2	No	FACU	1 - Rapid Test f	for Hydrophytic Ve	getation	
6. Geum aleppicum	2	No	FACW	2 - Dominance			
7.				3 - Prevalence			
8					al Adaptations <sup>1</sup> (F arks or on a separ		
9.					•		•
10	59	=Total Cover			drophytic Vegetat		
Woody Vine Stratum (Plot size: 30'	<u> </u>	= Total Cover		<sup>1</sup> Indicators of hydric be present, unless		, ,,	must
1	,			·	alotarboa or proble	Jinatio.	
2.				Hydrophytic Vegetation			
		=Total Cover		Present? Ye	s No_	X	
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			<u> </u>			-
A preponderance of hydrophytic vegeation is not pres	,						

SOIL Sampling Point: -CMS-008-UI

	cription: (Describe	to the dept				tor or o	confirm the a	bsence of ind	icators.)	
Depth	Matrix			x Featur		. 2	_			
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Textur		Remarks	
0-6	10YR 3/2	100					Loamy/CI	ayey		
6-14	10YR 3/1	100					Loamy/Cl	layey		
	· ·									
							\ <u></u>			
-										
-							-			
1 <sub>Type:</sub> C-C	concentration, D=Dep	lotion BM-	Paduaad Matrix A		kad Sand	Croine		Location: DL	Pore Lining, M=Mat	riv
Hydric Soil		ietion, Rivi=	Reduced Matrix, N	io=ivias	keu Sand	Giains			Problematic Hydric	
Histosol			Sandy Gle	ved Mat	rix (S4)		•		ie Redox (A16)	, 00113 .
	pipedon (A2)		Sandy Red				_		nese Masses (F12)	
	istic (A3)		Stripped M				_		: Material (F21)	
	en Sulfide (A4)		Dark Surfa	•	,		_		w Dark Surface (F2	2)
Stratified	d Layers (A5)		Loamy Mu	cky Mine	eral (F1)		_	Other (Exp	ain in Remarks)	
2 cm Mu	uck (A10)		Loamy Gle	yed Ma	trix (F2)		_			
Depleted	d Below Dark Surface	e (A11)	Depleted N	/latrix (F	3)					
Thick Da	ark Surface (A12)		Redox Dar	k Surfac	e (F6)		3	Indicators of h	ydrophytic vegetatio	n and
	Mucky Mineral (S1)		Depleted D	ark Sur	face (F7)			wetland hy	drology must be pre	sent,
5 cm Mu	ucky Peat or Peat (S3	3)	Redox Dep	ression	s (F8)			unless dist	urbed or problemation	<b>).</b>
Restrictive	Layer (if observed):									
Type:										
Depth (i	nches):						Hydric Soil	Present?	Yes	NoX
Remarks:										
The soil prof	file does not meet the	e criteria for	any hydric soil ind	licators.						
HYDROLO	OGY									
-	drology Indicators: cators (minimum of c	no ie roquir	od: chock all that	annly)				Socondary Indi	cators (minimum of	two required)
-	Water (A1)	nie is requir	Water-Stai		ives (R9)				il Cracks (B6)	two required)
I —	ater Table (A2)		Aquatic Fa		` '		_		atterns (B10)	
Saturation	` '		True Aqua	`	,		_		Water Table (C2)	
	farks (B1)		Hydrogen			)	_	Crayfish Bu		
	nt Deposits (B2)		Oxidized R				oots (C3)	Saturation	Visible on Aerial Ima	agery (C9)
Drift De	posits (B3)		Presence	of Reduc	ced Iron (	C4)	_	Stunted or	Stressed Plants (D1	)
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	ls (C6)	Geomorphi	c Position (D2)	
Iron Dep	oosits (B5)		Thin Muck	Surface	(C7)		_	FAC-Neutra	al Test (D5)	
Inundati	on Visible on Aerial I	magery (B7)	Gauge or \	Well Dat	a (D9)					
Sparsely	y Vegetated Concave	Surface (B	8)Other (Exp	lain in R	temarks)					
Field Obser	rvations:									
Surface Wa	ter Present? Ye	es		Depth (i	nches): _					
Water Table		es			nches): _					
Saturation P		es	No	Depth (i	nches): _		Wetland I	Hydrology Pre	sent? Yes	No X
	pillary fringe)									
Describe Re	ecorded Data (stream	gauge, moi	nitoring well, aeria	ı pnotos	, previou	s inspec	ctions), it availa	able:		
Remarks:										
	and/or secondary wet	land hydrol	ogy indicators wer	e preser	nt at the t	ime of s	sampling.			
', '		, 3		,		•	, 5			
I										

Project/Site: Anguin-Brie 138kV R0/Brie Substation		City/Cour	nty: Licking		Sam	pling Date:	5/11/2	2022
Applicant/Owner: AEP				State: 0	OH Samı	pling Point:	W-CI	MS-011
Investigator(s): CMS, HA		Section, T	ownship, Rar	nge: S25 2N 15	5W			
Landform (hillside, terrace, etc.): Flat		ı	_ocal relief (c	oncave, convex,	none): concav	re		
Slope (%): 2 Lat: 40.057436			82.749951			: NAD 83		
Soil Map Unit Name: BeA: Bennington silt loam, 0 to 2 p	ercent slope			NW	I classification:			
Are climatic / hydrologic conditions on the site typical for			Yes x					
Are Vegetation X , Soil X , or Hydrology X sig		-		circumstances" pr			οХ	
Are Vegetation X , Soil , or Hydrology na				plain any answers				•
SUMMARY OF FINDINGS – Attach site map				•			ures,	etc.
Hydrophytic Vegetation Present? Yes X No			Sampled Are					
		within	n a Wetland?	' Yes	X No	·		
Wetland Hydrology Present? Yes X No								
Remarks: This sample point is representative of W-CMS-011 a Pt water from percolating properly through the soil and affer			•			•	•	
VEGETATION – Use scientific names of plan	its.							
·	Absolute	Dominant	Indicator					
· ———	% Cover	Species?	Status	Dominance Te				
1	·		I	Number of Dor Are OBL, FAC	•	s That	2	(A)
3.				Total Number		nacies		- (^)
4.				Across All Stra		pecies	3	(B)
5.				Percent of Don	minant Species	That		<u>-</u> ``
	=	Total Cover		Are OBL, FAC			6.7%	(A/B)
Sapling/Shrub Stratum (Plot size: 15')	_							
1				Prevalence In				
2				Total % C		Multiply		-
3			I	OBL species FACW species	20 5 52		20 104	-
5.	<del></del> .			FACW species FAC species	2	x 2 =	6	-
J		Total Cover		FACU species			80	-
Herb Stratum (Plot size: 5' )		10.0.0	J	UPL species	0	x 5 =	0	-
1. Poa palustris	30	Yes	FACW	Column Totals			210	(B)
2. Phleum pratense	20	Yes	FACU		Index = B/A =			• ` ′
3. Juncus effusus	20	Yes	OBL	l				
4. Packera aurea	10	No	FACW	Hydrophytic V	/egetation Inc	licators:		
5. Euthamia graminifolia	10	No	FACW	1 - Rapid 7	Test for Hydrop	ohytic Veget	ation	
6. Ulmus americana	2	No	FACW		ance Test is >5			
7. Rumex crispus	2	No	FAC	X 3 - Prevale				
8					ological Adapta	,		porting
9					Remarks or on	•		
10					ic Hydrophytic	_		
Marsha Vina Charles (Dietoine 20)	94 =	Total Cover		<sup>1</sup> Indicators of h	•	-	•	must
Woody Vine Stratum (Plot size: 30')			}	be present, unl	less disturbed	or problema	itic.	
1	<del></del> .		<del></del>	Hydrophytic				
	<u>_</u> :	Total Cover	—— I	Vegetation Present?	Yes X	No		
Describes (Include photo numbers here or on a copere	•	10(a) 0070.		11000	160_/.			
Remarks: (Include photo numbers here or on a separated Managed plant communities. These actions can result in		of certain sp	secies and the	eir replacement w	vith other spec	ies Examine	e weed	v
species that become established within cropped fields.				S				,

US Army Corps of Engineers

Depth   Matrix   Redox Features   Redox Features   Depth   Color (moles)   % Color (moles)   % Color (moles)   % Color (moles)   % Depth   Color   Texture   Remarks		cription: (Describe t	o the depth				tor or o	confirm the al	bsence of ir	ndicators.)		
0-8 10YR 4/1 90 10YR 3/6 10 C M Loamy/Clayey Prominent redox concentrations    Type: Ca-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.   Total Care Matrix   Total	Depth	1										
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains.  #ydric Soil Indicators:	(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textur	e	R	emarks	
Hydric Soil Indicators:   Indicators for Problematic Hydric Soils*:   Histosoil (A1)   Sandy Gleyed Matrix (S4)   Coast Prairie Redox (A16)   Iron-Manganese Masses (F12)   Iron-Mangane	0-8	10YR 4/1	90	10YR 3/6	10	С	M	Loamy/Cla	ayey	Prominent re	dox concer	ntrations
Hydric Soil Indicators:   Indicators for Problematic Hydric Soils*:   Histosoil (A1)   Sandy Gleyed Matrix (S4)   Coast Prairie Redox (A16)   Iron-Manganese Masses (F12)   Iron-Mangane												
Hydric Soil Indicators:   Indicators for Problematic Hydric Soils*:   Histosoil (A1)   Sandy Gleyed Matrix (S4)   Coast Prairie Redox (A16)   Iron-Manganese Masses (F12)   Iron-Mangane												
Hydric Soil Indicators:   Indicators for Problematic Hydric Soils*:   Histosoil (A1)   Sandy Gleyed Matrix (S4)   Coast Prairie Redox (A16)   Iron-Manganese Masses (F12)   Red Parent Material (F21)   Hydrogen Sulfide (A4)   Dark Surface (S7)   Red Parent Material (F21)   Very Shallow Dark Surface (F22)   Stratified Layers (A5)   Loamy Mucky Mineral (F1)   Very Shallow Dark Surface (F22)   Very Shallow Dark Surface (F22)   Depleted Delow Dark Surface (A11)   X Depleted Matrix (F3)   Think Dark Surface (A12)   Redox Dark Surface (F6)   Persent (A12)   Redox Dark Surface (F7)   Persent (A12)   Redox Dark Surface (F7)   Persent (A12)   Persent (A12												
Hydric Soil Indicators:   Indicators for Problematic Hydric Soils*:   Histosoil (A1)   Sandy Gleyed Matrix (S4)   Coast Prairie Redox (A16)   Iron-Manganese Masses (F12)   Iron-Mangane								-				-
Hydric Soil Indicators:   Indicators for Problematic Hydric Soils*:   Histosoil (A1)   Sandy Gleyed Matrix (S4)   Coast Prairie Redox (A16)   Iron-Manganese Masses (F12)   Iron-Mangane												
Hydric Soil Indicators:   Indicators for Problematic Hydric Soils*:   Histosoil (A1)   Sandy Gleyed Matrix (S4)   Coast Prairie Redox (A16)   Iron-Manganese Masses (F12)   Iron-Mangane								-				
Hydric Soil Indicators:   Indicators for Problematic Hydric Soils*:   Histosoil (A1)   Sandy Gleyed Matrix (S4)   Coast Prairie Redox (A16)   Iron-Manganese Masses (F12)   Iron-Mangane	1											
Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16)   Histosol (A2) Sandy Redox (S5)   Consequence Masses (F12)   Black Histic (A3)   Stripped Matrix (S6)   Red Parent Material (F21)   Hydrogen Sulfide (A4)   Dark Surface (S7)   Very Shallow Dark Surface (F22)   Stratified Layers (A5)   Loamy Mucky Mineral (F1)   Other (Explain in Remarks)    2 cm Muck (A10)   Loamy Gleyed Matrix (F2)   Depleted Below Dark Surface (A11)   Redox Dark Surface (F6)   Sandy Mucky Mineral (S1)   Depleted Dark Surface (F6)   Sandy Mucky Mineral (S1)   Depleted Dark Surface (F7)   Sandy Mucky Mineral (S1)   Depleted Dark Surface (F7)   Sandy Mucky Mineral (S1)   Depleted Dark Surface (F7)   Type: clay fragipan   Deph (inches): 8   Hydric Soil Present? Yes   No    Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required: check all that apply)   Secondary Indicators (minimum of two required)   Surface Water (A1)   Water-Stained Leaves (B9)   X Surface Soil Cracks (B6)   Primary Indicators (minimum of one is required: check all that apply)   Secondary Indicators (minimum of two required)   Surface Water (A1)   Water-Stained Leaves (B9)   X Surface Soil Cracks (B6)   Primary Parks (B10)   Dry-Season Water Table (C2)   Sediment Deposits (B3)   True Aquatic Plants (B14)   Dry-Season Water Table (C2)   Sediment Deposits (B3)   Presence of Reduced Iron (C4)   X Suturation Visible on Aerial Imagery (C9)   Mater Marks (B1)   Primary (B10)   Algal Mater Orust (B4)   Recent Iron Reduction in Titled Soils (C6)   Inon Deposits (B5)   Thin Muck Surface (C7)   Thin Muck Surface (C7)   Inundation Visible on Aerial Imagery (B7)   Gauge or Well Data (D9)   Sparsely Vegetated Concave Surface (B8)   Other (Explain in Remarks)   Water Table Present? Yes   No   Depth (inches):			etion, RM=R	educed Matrix, N	/IS=Masi	ked Sand	Grains					
Histic Epipedon (A2)	-			Sandy Cla	und Mat	riv (C1)		II			-	olis :
Black Histic (A3)		` '			-	iix (54)		_	_			
Hydrogen Sulfide (A4)						:)		_				
Stratified Layers (A5)		` '			,	,,		_		•	,	
2 cm Muck (A10)					, ,	eral (F1)		_				
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Redox Dark Surface (F6) Redox Dark Surface (F6) Redox Dark Surface (F7) Redox Depressions (F8)  Restrictive Layer (if observed): Type:					-			_				
Thick Dark Surface (A12)		` '	(A11)									
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed): Type:			,		•	•		<sup>3</sup> I	Indicators of	hydrophytic v	egetation a	and
Restrictive Layer (if observed):	Sandy M	lucky Mineral (S1)		Depleted [	Dark Sur	face (F7)			wetland I	nydrology mus	st be prese	nt,
Type: clay fragipan bepth (inches): 8   Hydric Soil Present? Yes No    Remarks: The soil profile meets the criteria for having a depleted matrix.  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)   Secondary Indicators (minimum of two required)   Surface Water (A1)   Water-Stained Leaves (B9)   X Surface Soil Cracks (B6)   High Water Table (A2)   Aquatic Fauna (B13)   Drainage Patterns (B10)   Saturation (A3)   True Aquatic Plants (B14)   Dry-Season Water Table (C2)   Water Marks (B1)   Hydrogen Sulfide Odor (C1)   Crayfish Burrows (C8)   Sediment Deposits (B2)   X Oxidized Rhizospheres on Living Roots (C3)   X Saturation (Sible on Aerial Imagery (C9)   Irin Deposits (B3)   Presence of Reduced Iron (C4)   S Sturtation (Sible on Aerial Imagery (B7)   Algal Mat or Crust (B4)   Recent Iron Reduction in Tilled Soils (C6)   Geomorphic Position (D2)   Iron Deposits (B5)   Thin Muck Surface (C7)   X FAC-Neutral Test (D5)   Separsely Vegetated Concave Surface (B8)   Other (Explain in Remarks)   Field Observations: Surface Water Present? Yes   No   X Depth (inches):   Water Table (Present? Yes   No   Depth (inches):   Water Table (Present? Yes   No   Depth (inches):   Wetland Hydrology Present? Yes   X No   Depth (inch			)	Redox De	oression	s (F8)			unless di	sturbed or pro	blematic.	
Type: clay fragipan bepth (inches): 8   Hydric Soil Present? Yes No    Remarks: The soil profile meets the criteria for having a depleted matrix.  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)   Secondary Indicators (minimum of two required)   Surface Water (A1)   Water-Stained Leaves (B9)   X Surface Soil Cracks (B6)   High Water Table (A2)   Aquatic Fauna (B13)   Drainage Patterns (B10)   Saturation (A3)   True Aquatic Plants (B14)   Dry-Season Water Table (C2)   Water Marks (B1)   Hydrogen Sulfide Odor (C1)   Crayfish Burrows (C8)   Sediment Deposits (B2)   X Oxidized Rhizospheres on Living Roots (C3)   X Saturation (Sible on Aerial Imagery (C9)   Irin Deposits (B3)   Presence of Reduced Iron (C4)   S Sturtation (Sible on Aerial Imagery (B7)   Algal Mat or Crust (B4)   Recent Iron Reduction in Tilled Soils (C6)   Geomorphic Position (D2)   Iron Deposits (B5)   Thin Muck Surface (C7)   X FAC-Neutral Test (D5)   Separsely Vegetated Concave Surface (B8)   Other (Explain in Remarks)   Field Observations: Surface Water Present? Yes   No   X Depth (inches):   Water Table (Present? Yes   No   Depth (inches):   Water Table (Present? Yes   No   Depth (inches):   Wetland Hydrology Present? Yes   X No   Depth (inch	Restrictive	Layer (if observed):										
Remarks: The soil profile meets the criteria for having a depleted matrix.    HYDROLOGY			an									
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface Water (A1) Surface Water (A2) Aquatic Fauna (B13) True Aquatic Plants (B14) Sediment Deposits (B2) Drift Deposits (B3) Drift Deposits (B3) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Ino Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)  Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Secondary Indicators (minimum of two required) X Surface Soil Cracks (B6) Drianage Patterns (B10) X Saturation Visible on Aerial Imagery (C9) X FAC-Neutral Test (D5)  Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes X No Depth (inches): Saturation Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	_ · · · -			_				Hydric Soil	Present?	Y	es	No
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface Water (A1) Surface Water (A2) Aquatic Fauna (B13) True Aquatic Plants (B14) Sediment Deposits (B2) Drift Deposits (B3) Drift Deposits (B3) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Ino Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)  Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Secondary Indicators (minimum of two required) X Surface Soil Cracks (B6) Drianage Patterns (B10) X Saturation Visible on Aerial Imagery (C9) X FAC-Neutral Test (D5)  Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes X No Depth (inches): Saturation Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Remarks:			_								
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       X Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B3)       Presence of Reduced Iron (C4)       X Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       X Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         X Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:         Surface Water Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         Gautation Present?       Yes       X       No       Wetland Hydrology Pre	The soil prof	ile meets the criteria	for having a	depleted matrix.								
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       X Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B3)       Presence of Reduced Iron (C4)       X Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       X Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         X Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:         Surface Water Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         Gautation Present?       Yes       X       No       Wetland Hydrology Pre												
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       X Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B3)       Presence of Reduced Iron (C4)       X Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       X Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         X Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:         Surface Water Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         Gautation Present?       Yes       X       No       Wetland Hydrology Pre												
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       X Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         X Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B3)       Presence of Reduced Iron (C4)       X Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       X Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         X Sparsely Vegetated Concave Surface (B8)       Other (Explain in Remarks)         Field Observations:         Surface Water Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         Gautation Present?       Yes       X       No       Wetland Hydrology Pre												
Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  Water-Stained Leaves (B9)  X Surface Soil Cracks (B6)  High Water Table (A2)  Aquatic Fauna (B13)  Drainage Patterns (B10)  X Saturation (A3)  True Aquatic Plants (B14)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Presence of Reduced Iron (C4)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Other (Explain in Remarks)  Field Observations:  Surface Water Present?  Yes  No  Depth (inches):  Water Table Present?  Yes  No  Depth (inches):  Gemary Indicators (minimum of two required)  X Surface Soil Cracks (B6)  Drainage Patterns (B10)  Dray-Season Water Table (C2)  Crayfish Burrows (C3)  X Sturtation Visible on Aerial Imagery (C9)  X Sturted or Stressed Plants (D1)  X Sturted or Stressed Plants (D1)  X FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes X No  Wetland Hydrology Present? Yes X No	HYDROLO	GY										
Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  Water-Stained Leaves (B9)  X Surface Soil Cracks (B6)  High Water Table (A2)  Aquatic Fauna (B13)  Drainage Patterns (B10)  X Saturation (A3)  True Aquatic Plants (B14)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Presence of Reduced Iron (C4)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Other (Explain in Remarks)  Field Observations:  Surface Water Present?  Yes  No  Depth (inches):  Water Table Present?  Yes  No  Depth (inches):  Gemary Indicators (minimum of two required)  X Surface Soil Cracks (B6)  Drainage Patterns (B10)  Dray-Season Water Table (C2)  Crayfish Burrows (C3)  X Sturtation Visible on Aerial Imagery (C9)  X Sturted or Stressed Plants (D1)  X Sturted or Stressed Plants (D1)  X FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes X No  Wetland Hydrology Present? Yes X No	Wetland Hy	drology Indicators:										
High Water Table (A2)  X Saturation (A3)  True Aquatic Flanta (B13)  True Aquatic Plants (B14)  Dry-Season Water Table (C2)  Water Marks (B1)  Hydrogen Sulfide Odor (C1)  Sediment Deposits (B2)  Drift Deposits (B3)  Presence of Reduced Iron (C4)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Saparsely Vegetated Concave Surface (B8)  Other (Explain in Remarks)  Field Observations:  Surface Water Present?  Yes  No  No  Depth (inches):  Saturation (D1)  Aquatic Flanta (B13)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  X Saturation Visible on Aerial Imagery (C9)  A Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  X FAC-Neutral Test (D5)  Field Observations:  Surface Water Present?  Yes  No  No  Depth (inches):  Saturation Present?  Yes  No  Depth (inches):  Saturation Present?  Yes  No  Depth (inches):  Setrated Balance  Wetland Hydrology Present?  Yes  No  No  No  Remarks:	_		ne is require	d; check all that	apply)			<u>S</u>	Secondary In	dicators (mini	mum of tw	o required)
X Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?  Water Table (C2)  No X Depth (inches):  Saturation (A3)  True Aquatic Plants (B14)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  X Saturation Visible on Aerial Imagery (C9)  A Stunted or Stressed Plants (D1)  Recent Iron Reduction in Tilled Soils (C6)  Geomorphic Position (D2)  Thin Muck Surface (C7)  X FAC-Neutral Test (D5)  Field Observations:  Surface Water Present?  Yes  No X  Depth (inches):  Saturation Present?  Yes  No Depth (inches):  Saturation Present?  Y	Surface	Water (A1)		Water-Sta	ined Lea	ves (B9)			X Surface	Soil Cracks (B	6)	
Water Marks (B1)	High Wa	ter Table (A2)		Aquatic Fa	auna (B1	3)			Drainage	Patterns (B10	0)	
Sediment Deposits (B2)	X Saturation	on (A3)		True Aqua	tic Plant	s (B14)			Dry-Seas	son Water Tab	ole (C2)	
Drift Deposits (B3)	Water M	arks (B1)		Hydrogen	Sulfide C	Odor (C1)	)	_				
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)  Iron Deposits (B5) Thin Muck Surface (C7) X FAC-Neutral Test (D5)  Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)  X Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)  Field Observations:  Surface Water Present? Yes No X Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes X No Depth (inches):  Gauge or Well Data (D9)  Other (Explain in Remarks)  Wetland Hydrology Present? Yes X No Depth (inches):  Saturation Present? Yes X No Depth (inches): 4 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							_				_	ery (C9)
Iron Deposits (B5)												
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)  X Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)  Field Observations:  Surface Water Present? Yes No X Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes X No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:							lled Soil					
X Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)  Field Observations:  Surface Water Present? Yes No _X Depth (inches): Water Table Present? Yes No _X Depth (inches): Saturation Present? Yes X No Depth (inches): Wetland Hydrology Present? Yes X No (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:			(DZ)			, ,		<u></u>	X FAC-Net	itrai Test (D5)		
Field Observations:  Surface Water Present? Yes No X Depth (inches):  Water Table Present? Yes No X Depth (inches):  Saturation Present? Yes X No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:			• • •	<u> </u>		` ,						
Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Water Table Present? Yes X No Depth (inches): Wetland Hydrology Present? Yes X No Depth (inches): 4 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:			Surface (Do	Other (Exp	naiii iii K	emarks)						
Water Table Present? Yes No X Depth (inches):			_	No. V	Donth /i	nohoo\.						
Saturation Present? Yes X No Depth (inches): 4 Wetland Hydrology Present? Yes X No (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:						· -						
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:						_	4	Wetland F	-lydrology F	Present? V	os X	No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:			<u> </u>		Deptii (ii	_		Wettand	iyarology i	resent: I	<u> </u>	
Remarks:			gauge, moni	toring well, aeria	l photos	previous	s inspec	ctions), if availa	able:			
		222 2 210 (011 00111			F	, ,		, ,				
Precipitation is the source of hydrology	Remarks:											
	Precipitation	is the source of hydr	ology									

Project/Site: Anguin-Brie 138kV R0/Brie Substation		City/Cou	ınty: Licking		Samplin	g Date:	5/11/2022
Applicant/Owner: AEP				State: C	OH Samplin	g Point:	W-CMS-011-UPL
Investigator(s): CMS, HA		Section, 7	Γownship, Ra	nge: S25 2N 15	W		
Landform (hillside, terrace, etc.): Flat			Local relief (c	oncave, convex, r	none): convex		
Slope (%): 2 Lat: 40.057428		Long:	82.750048		Datum: N	AD 83	
Soil Map Unit Name: BeA: Bennington silt loam, 0 to 2	percent slop	es		NWI	classification: N	Ą	
Are climatic / hydrologic conditions on the site typical f	or this time o	f year?	Yes x	No (If i	no, explain in Rei	marks.)	
Are Vegetation, Soil, or Hydrology	significantly o	listurbed?	Are "Normal C	Circumstances" pre	esent? Yes	x No	
Are Vegetation, Soil, or Hydrology			(If needed, ex	plain any answers	in Remarks.)		
SUMMARY OF FINDINGS – Attach site ma			g point lo	cations, trans	ects, importa	ant featu	res, etc.
Hydrophytic Vegetation Present? Yes X No	n	Is the	e Sampled Ar	ea			
	о <u>Х</u>		n a Wetland?		No	X	
	X			•			
Remarks:		•					
This sample point is representative of the upland fore	st community	that surroun	ds Wetland W	/-CSM-011.			
VEGETATION – Use scientific names of pla		Daminant	la di satan				
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Te	est worksheet:		
1. Acer rubrum	60	Yes	FAC		ninant Species Th	hat	
2.				Are OBL, FAC	•	5	(A)
3					of Dominant Spec	ies	
4				Across All Strat	ta:	6	(B)
5		Tatal Causer			ninant Species Th		00/ /A/D\
Sapling/Shrub Stratum (Plot size: 15'	. 60 =	=Total Cover		Are OBL, FAC	/v, or FAC:	83.3	8% (A/B)
1. Morus alba	, 20	Yes	FAC	Prevalence Inc	dex worksheet:		
2. Acer rubum	30	Yes	FAC	Total % Co		Multiply b	v:
3.				OBL species		1 = 0	
4.				FACW species	25 x 2	2 = 50	)
5.				FAC species	140 x 3	3 = 420	0
	50 =	Total Cover		FACU species	35 x	4 = 140	0
Herb Stratum (Plot size: 5')				UPL species		5 =0	
1. Poa palustris	30	Yes	FACU	Column Totals:		610	0 (B)
2. Toxicodendron radicans	30	Yes	FAC	Prevalence I	ndex = B/A =	3.05	
Geum aleppicum     Phalaris arundinacea	<u>20</u> 5	Yes No	FACW FACW	Hydrophytic V	egetation Indica	tore:	
5. Solidago canadensis	5	No	FACU		est for Hydrophy		ion
6			17100		nce Test is >50%	-	0.1
7.					nce Index is ≤3.0		
8.				4 - Morpho	logical Adaptation	ns¹ (Provide	e supporting
9					Remarks or on a s	•	•
10				Problemati	c Hydrophytic Ve	getation <sup>1</sup> (F	Explain)
	90 =	Total Cover		'	ydric soil and wet		
Woody Vine Stratum (Plot size: 30'	)			be present, unle	ess disturbed or p	oroblematic	).
1.				Hydrophytic			
2	<del></del> .	Total Cover		Vegetation Present?	Yes X	No	
Pomorko: (Ingludo abato aumbora hara an ancia		- 10101 00761		r resent:	.c3_ <u>/</u>	<del></del>	
Remarks: (Include photo numbers here or on a sepal A preponderance of hydrophytic vegetation is not pre-	,						
, , , , , , , , , , , , , , , , , , ,							

SOIL Sampling Point: -CMS-011-UI

	cription: (Describe	to the depth				tor or o	confirm the	absence of in	dicators.)		
Depth	Matrix			x Featur		. 2					
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Textu		Rei	marks	
0-12	10YR 5/3	100					Loamy/C	Clayey			
			_								
											•
1Type: C-C	oncentration, D=Dep	etion RM-R	Peduced Matrix M	 lseM-2N	ked Sand			<sup>2</sup> l ocation: Pl	=Pore Lining, I	M-Matriy	
Hydric Soil		Ction, reivi=re	caacca Matrix, N	IO-IVIAS	nea Garie	Oranis			r Problematic		
Histosol			Sandy Gle	yed Mat	rix (S4)				airie Redox (A1	-	
	pipedon (A2)		Sandy Red		` ,		•		ganese Masses		
Black Hi			Stripped M		5)		•		nt Material (F2		
Hydroge	n Sulfide (A4)		Dark Surfa	ce (S7)			•	Very Sha	llow Dark Surfa	ace (F22)	
Stratified	d Layers (A5)		Loamy Mu	cky Mine	eral (F1)		•	Other (Ex	plain in Remar	ks)	
2 cm Mu	ıck (A10)		Loamy Gle	yed Mat	rix (F2)						
Depleted	d Below Dark Surface	(A11)	Depleted N	,	,			_			
	ark Surface (A12)		Redox Dar		` '				hydrophytic ve	-	
I — '	lucky Mineral (S1)		Depleted D		` '				ydrology must		nt,
5 cm Mu	icky Peat or Peat (S3	5)	Redox Dep	pression	s (F8)			unless dis	sturbed or prob	lematic.	
	Layer (if observed):										
Type:	clay fragip		_								
Depth (ir	nches):	12	_				Hydric Soi	il Present?	Yes	s	No X
Remarks:											
i ne soli prof	ile does not meet the	criteria for a	iny nyaric soli ind	icators.							
HYDROLO	OGY										
	drology Indicators:										
-	cators (minimum of o	ne is require	d: check all that a	(vlage				Secondary Inc	dicators (minim	num of two	o required)
	Water (A1)		Water-Stai		ves (B9)				Soil Cracks (B6		
High Wa	iter Table (A2)		Aquatic Fa	una (B1	3)		•		Patterns (B10)		
Saturation	on (A3)		True Aqua	tic Plant	s (B14)			Dry-Seas	on Water Table	e (C2)	
Water M	arks (B1)		Hydrogen	Sulfide (	Odor (C1)	)	•	Crayfish I	Burrows (C8)		
Sedimer	nt Deposits (B2)		Oxidized R	hizosph	eres on l	iving R	oots (C3)	Saturation	n Visible on Ae	rial Image	ery (C9)
Drift Dep	oosits (B3)		Presence	of Reduc	ced Iron (	C4)			r Stressed Pla		
	at or Crust (B4)		Recent Iro			lled Soil	s (C6)		hic Position (D	2)	
	osits (B5)	(5-)	Thin Muck					FAC-Neu	tral Test (D5)		
	on Visible on Aerial Ir		Gauge or \		, ,						
` _ '	Vegetated Concave	Surface (B8	)Other (Exp	iain in R	emarks)						
Field Obser		_	NI-	Danilla C							
Surface Wat				Depth (i	_						
Water Table Saturation P		s			nches): _ nches):		Wotland	Hydrology P	rosont? Vo	•	No. Y
	oillary fringe)	s	No	Deptii (i			Welland	riyurology F	resent? Yes	<u> </u>	No X
	corded Data (stream	gauge, mon	itoring well aeria	l photos	. previou	s inspec	tions), if avai	ilable:			
2 2301130 110	Data (otrodin	J		. p. 10100	, p. 0 110 a	opou	,, 11 ava				
Remarks:											
No primary a	and/or secondary wet	land hydrolog	gy indicators wer	e preser	nt.						
I											

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization									
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001								

#### Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

# **Background Information**

Name: Charlotte Stallone

Date: 5/10/2022

Affiliation:

**AECOM** 

Address: 564 White Pond drive, Akron OH 44320

Phone Number: 717-617-7738

e-mail address:

charlotte.stallone@aecom.com

Name of Wetland: W-CMS-001

Vegetation Communit(ies):

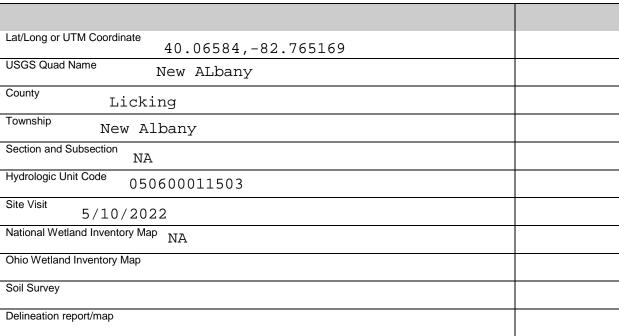
PEM

HGM Class(es):

Depressional

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





Name of Wetland:

W-CMS-001

Wetland Size (acres, hectares): 0.245

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





Comments, Narrative Discussion, Justification of Category Changes:

The portion within the study area was found to consist of a PEM community. Area used as an access for construction of storm water retention pond and substation. Soils have been compacted. Compaction prevents water from percolating properly through the soil and affects hydrology, vegetation has been removed. Wetland is dominated by reed canary grass and flat topped goldenrod.

Final score: 15 Category:

### **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.	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.		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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. 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	
2	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2  YES	Go to Question 2
	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 Database as a high quality wetland?	YES 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 regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES 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 hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES  Wetland is a Category 1 wetland  Go to Question 6	Go to Question 6
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or 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%?	YES 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 most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible	Go to Question 9a
	ulameters greater trian 450m (17.7m) don:	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	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?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible	Go to Question 9c
	The state of the s	Category 3 status	
		Go to Question 10	
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	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These	Go to Question ou	Co to Question to
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category	Go to Question 9e
	native species can also be present:	3 wetland	Oo to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		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	YES	NO
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	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.		
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	YES	NO
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	evaluated for possible Category 3 status	Quantitative Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 5 status	Natility
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum	•	Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		_
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

### Wetland 1

Site: Anguir	138kV Extension	No 4/Anguin-Brie 138kV R0 Rater(s): C.Sta	allone	Date:	5/10/2022
		-	Field Id:		
	1 1	Metric 1. Wetland Area (size).	W-CMS-001		
max 6 pts	subtotal	Select one size class and assign score.			
		>50 acres (>20.2ha) (6 pts)	0.245 acre	es delineated within survey are	ea
		25 to <50 acres (10.1 to <20.2ha) (5 pts)			
		10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts)			
		0.3 to <3 acres (0.12 to <1.2ha) (2pts)			
		x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)			
_		<0.1 acres (0.04ha) (0 pts)			
	1 2	Metric 2. Upland buffers and s	surrounding land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only	y one and assign score. Do not double check	<b>c.</b>	
		WIDE. Buffers average 50m (164ft) or more arou			
		MEDIUM. Buffers average 25m to <50m (82 to < NARROW. Buffers average 10m to <25m (32ft to	, , , , , , , , , , , , , , , , , , , ,		
		x VERY NARROW. Buffers average <10m (<32ft)			
		2b. Intensity of surrounding land use. Select of	one or double check and average.		
		VERY LOW. 2nd growth or older forest, prairie, s			
		LOW. Old field (>10 years), shrubland, young se		N	
		MODERATELY HIGH. Residential, fenced pasture x HIGH. Urban, industrial, open pasture, row cropp	• • • • • • • • • • • • • • • • • • • •	3)	
_	44.01.40.0		(.)		
	11.0 13.0	Metric 3. Hydrology.			
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply.	3b. Connectivity. Score all the	at apply.	
		High pH groundwater (5) Other groundwater (3)	100 year floodplain (1)  x Between stream/lake and other	r human use (1)	
		x Precipitation (1)	Part of wetland/upland (e.g. for		
		Seasonal/Intermittent surface water (3)	x Part of riparian or upland corrid		ale
		x Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one.	3d. Duration inundation/satur Semi- to permanently inundated		CK.
		>0.7 (27.6in) (3)	Regularly inundated/saturated (		
		0.4 to 0.7m (15.7 to 27.6in) (2)	Seasonally inundated (2)	20am (42in) (4)	
		x <0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regime	x Seasonally saturated in upper 3  B. Score one or double check and average.	300111 (12111) (1)	
		None or none apparent (12)	Check all disturbances obser	_	
		Recovered (7) Recovering (3)	ditch tile x	point source (nonstormwater filling/grading	7)
		x Recent or no recovery (1)	dike X		sed as an access rd
			weir	dredging	
		=	stormwater input	Other:	
	3 16	Metric 4. Habitat Alteration an	d Development.		
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or doub	le check and average.		
		None or none apparent (4)  Recovered (3)			
		Recovering (2)			
		x Recent or no recovery (1)			
		4b. Habitat development. Select only one and Excellent (7)	assign score.		
		Very good (6)			
		Good (5)			
		Moderately good (4) Fair (3)			
		Poor to fair (2)			
		x Poor (1)	ook and average		
		4c. Habitat alteration. Score one or double ch None or none apparent (9)	Check all disturbances observe	ed	
		Recovered (6)	mowing x	shrub/sapling removal	
		Recovering (3) x Recent or no recovery (1)	grazing x clearcutting	herbaceous/aquatic bed rem sedimentation	ioval
		Recent or no recovery (1)	x clearcutting x selective cutting	_sedimentation dredging	
			x woody debris removal	farming	
		ភ	toxic pollutants	nutrient enrichment	
	16				
	subtotal this	s page ORAM v. 5.0 Field Form Quantitative Rating			

ORAM-wetland 1.xlsm | test\_Field 5/16/2022

Site: Ano	guin 138kV	Extension No 4/Angl Rater(s): C.Stallone			Date:	5/10/2022
				Field Id:		
	16			W-CMS-001		
		1				
	subtotal this	<u>.</u>				
	0 16	Metric 5. Special Wetlands.				
max 10 pts.	subtotal	Check all that apply and score as indicated	d.			
		Bog (10)				
		Fen (10)				
		Old growth forest (10)				
		Mature forested wetland (5)  Lake Erie coastal/tributary wetland-unrestricted hydrology	(10)			
		Lake Erie coastal/tributary wetland-restricted hydrology (5)				
		Lake Plain Sand Prairies (Oak Openings) (10)	,			
		Relict Wet Praires (10)				
		Known occurrence state/federal threatened or endangered		es (10)		
		Significant migratory songbird/water fowl habitat or usage Category 1 Wetland. See Question 5 Qualitative Rating (-				
	-1 15			on microtonography		
	-1 13	<u>'</u> '	pei 3i	,	0 1	
max 20pts.	subtotal	6a. Wetland Vegetation Communities.	i	Vegetation Community Cove		
		Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 ac		
		Aquatic bed 1 Emergent		Present and either comprises small par vegetation and is of moderate quality, or		
		Shrub		significant part but is of low quality	i comprises a	
		Forest	2	Present and either comprises significant	t part of wetland's 2	
		Mudflats		vegetation and is of moderate quality or	comprises a small	
		Open water	_	part and is of high quality		
		Other6b. horizontal (plan view) Interspersion.	3	Present and comprises significant part, vegetation and is of high quality	or more, or wetland's 3	
		Select only one.		vegetation and is or riight quality		
		High (5)		Narrative Description of Vegetation 0	Quality	
		Moderately high(4)		Low spp diversity and/or predominance	of nonnative or low	
		Moderate (3)  Moderately low (2)		disturbance tolerant native species  Native spp are dominant component of	the vegetation med	
		x Low (1)		although nonnative and/or disturbance		
		None (0)		can also be present, and species divers		
		6c. Coverage of invasive plants. Refer		moderately high, but generallyw/o prese		
		Table 1 ORAM long form for list. Add		threatened or endangered spp to		
		or deduct points for coverage		A predominance of native species, with		
		Extensive >75% cover (-5)  x Moderate 25-75% cover (-3) Phalaris arundina		and/or disturbance tolerant native spp a absent, and high spp diversity and ofter	•	
		Sparse 5-25% cover (-1)		the presence of rare, threatened, or end		
		Nearly absent <5% cover (0)				
		Absent (1)		Mudflat and Open Water Class Qualit	У	
		6d. Microtopography.  Score all present using 0 to 3 scale.		Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88 acres	)	
		Coarse woody debris >15cm (6in)		High 4ha (9.88 acres) or more	<u>'</u>	
		Standing dead >25cm (10in) dbh	•			
		Amphibian breeding pools		Microtopography Cover Scale		
				Absent Present very small amounts or if more	common	
				of marginal quality	Johnnon	
				Present in moderate amounts, but not o	f highest	
Category 1				quality or in small amounts of highest q	uality	
	15 GRANI	D TOTAL(max 100 pts)	3	Present in moderate or greater amounts	3	
				and of highest quality		
				3 1 5		

ORAM-wetland 1.xlsm | test\_Field 5/16/2022

# **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 MO	If yes, Category 1.
	Question 6. Bogs	YES MO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES MO	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	
3	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	3	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE	15	Category based on score breakpoints 1

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	<b>©</b>	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 overcategorized 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	0	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?	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	<b>©</b>	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	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.

	Fir	nal Category	
Choose one	( Category 1 )	Category 2	Category 3

**End of Ohio Rapid Assessment Method for Wetlands.** 

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization			
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001		

### Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

## **Background Information**

Name: Charlotte Stallone

Date: 5/10/2022

Affiliation:

AECOM

Address: 564 White Pond drive, Akron OH 44320

Phone Number: 717-617-7738

e-mail address:

charlotte.stallone@aecom.com

Name of Wetland: W-CMS-002

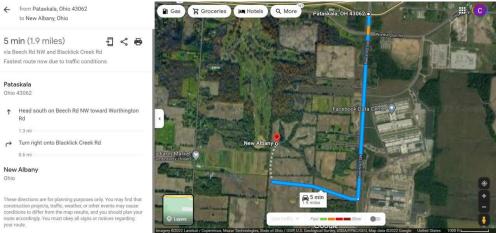
Vegetation Communit(ies):

PEM

HGM Class(es):

Depressional

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



Imagery €20zZ Landsat / Copernous, Maxar Technologies, State of Unio 7 USP/ U.S. Geological Survey, USDA/PPAC/GEO, Map data €70zZ Google United States 1000 H	
Lat/Long or UTM Coordinate 40.065355, -82.765663	
USGS Quad Name New ALbany	
County Licking	
Township New Albany	
Section and Subsection NA	
Hydrologic Unit Code 050600011503	
Site Visit 5/10/2022	
National Wetland Inventory Map NA	
Ohio Wetland Inventory Map	
Soil Survey	
Delineation report/map	
	1

Name of Wetland:

W-CMS-002

Wetland Size (acres, hectares): 0.615 acres

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





Comments, Narrative Discussion, Justification of Category Changes:

The portion within the study area was found to consist of a PEM community. Area used as an access for construction of storm water retention pond and substation. Soils have been compacted. Compaction prevents water from percolating properly through the soil and affects hydrology, vegetation has been removed. Wetland is dominated by reed canary grass, flat topped goldenrod and white clover.

Final score: 18 Category:

### **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.	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.		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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. 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	
2	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2  YES	Go to Question 2
	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 Database as a high quality wetland?	YES 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 regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES 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 hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES  Wetland is a Category 1 wetland  Go to Question 6	Go to Question 6
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or 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%?	YES 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 most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible	Go to Question 9a
	ulameters greater trian 450m (17.7m) don:	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	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?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible	Go to Question 9c
	The state of the s	Category 3 status	
		Go to Question 10	
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	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These	Go to Question ou	Co to Question to
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category	Go to Question 9e
	native species can also be present:	3 wetland	Oo to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		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	YES	NO
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	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.		
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	YES	NO
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	evaluated for possible Category 3 status	Quantitative Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 5 status	Natility
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum	•	Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		_
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

### Wetland 2

Site: Anguin 138kV I	Extension No	4/Anguin-Brie 138kV R0 Rater(s): C.Stallone		Date:	5/10/2022
		•	Field Id:	•	
2	2	Metric 1. Wetland Area (size).	W-CMS-002		
max 6 pts	subtotal	Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts)  x 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)	0.615 acre	es delineated within survey are	еа
1	3	<0.1 acres (0.04ha) (0 pts)  Metric 2. Upland buffers and surrou	ındina land usa		
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one and WIDE. Buffers average 50m (164ft) or more around wetlan MEDIUM. Buffers average 25m to <50m (82 to <164ft) ard NARROW. Buffers average 10m to <25m (32ft to <82ft) a VERY NARROW. Buffers average <10m (<32ft) around w 2b. Intensity of surrounding land use. Select one or do VERY LOW. 2nd growth or older forest, prairie, savannah	d assign score. Do not double check nd perimeter (7) ound wetland perimeter (4) round wetland perimeter (1) vetland perimeter (0) buble check and average. , wildlife area, etc. (7)	c.	
		LOW. Old field (>10 years), shrubland, young second grown MODERATELY HIGH. Residential, fenced pasture, park,   HIGH. Urban, industrial, open pasture, row cropping, minit	conservation tillage, new fallow field. (3	3)	
11.0	_	Metric 3. Hydrology.	ig, construction (1)		
max 30 pts.		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. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) x <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic regime. Score None or none apparent (12) Recovered (7) Recovering (3) x Recent or no recovery (1)  Metric 4. Habitat Alteration and Dev	Check all disturbances obser ditch title dike X dike X weir stormwater input	r human use (1) rest), complex (1) for (1) ration. Score one or dbl che d/saturated (4) (3)  30cm (12in) (1)  rved point source (nonstormwate filling/grading road bed/RR track  us	
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double check	•		
		None or none apparent (4) Recovered (3) Recovering (2) X Recent or no recovery (1) 4b. Habitat development. Select only one and assign s Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and s None or none apparent (9) Recovered (6) Recovering (3) X Recent or no recovery (1)	score.	shrub/sapling removal herbaceous/aquatic bed rem sedimentation dredging	noval
	17 subtotal this pag	ge ORAM v. 5.0 Field Form Quantitative Rating			

ORAM-wetland 2.xlsm | test\_Field 5/16/2022

Field Id: W-CMS-002  Metric 5. Special Wetlands. Check all that apply and score as indicated. Sog (10) Dul growth forest (10) Muture forested welfand (5) Lake Eric coastal/ributary wetland-restricted hydrology (10) Lake Eric coastal/ributary wetland-restricted hydrology (10) Lake Eric coastal/ributary wetland-restricted hydrology (10) Lake Plan Sand Prairies (Dat Opening) (10) Significant migratory songistridware flow habitat or usage (10) Significant migratory songistridware Rating (1-0) Metric 6. Plant communities. Socie all present using 0 to 3 scale. Associated to community Cover Scale Score all present using 0 to 3 scale. Associated to community Cover Scale Should be supported to the score all present using 0 to 3 scale. Associated to community Cover Scale Should be supported to the score all present using 0 to 3 scale. Associated to descript the score all present using 0 to 3 scale. Associated to of the score all present using 0 to 3 scale. Associated to of the score all present using 0 to 3 scale. Associated to of the score (3) Moderately high, but generallywing presence of rare and sole present using 0 to 3 scale. Associated to of this quality Cover speciation and so in display using the scale and score and sole present using 0 to 3 scale. Associated to of this quality Cover speciation of the scale and score of the sca	Site: Ang	juin 138kV	Extension No 4/Angl Rater(s): C.Stallone		Date:	5/10/2022
Metric 5. Special Wetlands.   Check all that apply and score as indicated.	-		•	Field Id:		
Metric 5. Special Wetlands. Check all that apply and score as indicated. Bog (10) Fen (10) Old growth forest (10) Absture forested wetland (5) Lake File in Sand Prainter (ook Openings) (10) Related Wet Prainer (10) Consort Wetlands (20) Related Wet Prainer (10) Consort Wetlands (3) Related Wet Prainer (10) Consort Wetlands (3) Absture forested wetland for ordinapered spoces (10) Significant migratory congrid/water frow habitat or usage (10) Cotegory I Wetland. See Question 5 Qualitative Raining (-10)  Extra Community Cover Scale See Wetland Vegetation Communities. See Wetland Communities. See Planes on See See See See See See See In Present usang (10) Cotegory I Wetland. See Question 5 Qualitative Raining (-10) Related Computing See See See See See See See See See Se		17		W-CMS-002		
Check all that apply and score as indicated.  Bog (10) Pen (10) Pe		subtotal this	page			
Bog (10)		0 17	Metric 5. Special Wetlands.			
Bog (10)	max 10 pts.	subtotal	Check all that apply and score as indicated.			
Old growth forest (10) Mature forested wethant (5) Lake Eric coastal/ributary wetland-unrestricted hydrology (10) Lake Plain Coastal/ributary wetland-unrestricted hydrology (5) Lake Plain Sand Prainse (20A Openings) (10) Relect Wet Prainse (10) Known occurrence state/federal threstened or endangered species (10) Significant impairity songbirchwaiter fowl habitat or usage (10) Category 1 Wetland. See Question S Gualitative Rating (-10)  Metric 6. Plant communities, interspersion, microtopography.  Medical Veta Plant communities, interspersion, microtopography.  Megalian of the Medical Veta Calles of C						
Mature forested wetland (5) Lake Erie coastaltributary wetland-vestricted hydrology (10) Lake Plein sand Prinaries (Oak Openings) (10) Relict Wet Prairies (10) Known occurrence statefederal threatened or endangered species (10) Significant migratory songbridwater fow habitat or usage (10) Significant migratory songbridwater fow habitat or usage (10)  Metric 6. Plant communities, interspersion, microtopography.  6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.  Aquatic bed I emergent Shrub Forest Forest I Mudfats Forest Forest I Mudfats Forest I Mudfats Forest Forest Forest I Mudfats Forest Forest Forest I Mudfats Forest Forest Forest Forest Forest Forest Forest Forest Forest						
Lake Eric coastal/ributary wetland-ventredir/clopy (5) Lake Pilan Sand Prairies (10) Relict Wet Prairies (10) Relict Wet Prairies (10) Romown occurrence statefederal threatened or endangered species (10) Significant impiratory songhir/dwate frol habitat or usage (10) Category 1 Wetland. See Question 5 Qualitative Rating (-10)  Metric 6. Plant communities. Score all present using 0 to 3 scale.  Aquatic bod I Emergent Shrub Forest Dene water Other Other Other Other Other Other Other Other Table 1 ORAM long form for list. Add Moderate (3) None (1) N						
Lake Eria coastal/ributary wetland-restricted hydrology (5) Lake Plans Sand Praises (10) Spring Praises (1						
Relict Wet Praires (10) Known occurrence state/federal threatened or endangered species (10) Significant migratory songhird/water fow habitat or usage (10) Category 1 Wethand. See Question 5 Qualitative Rating (-10)  Metric 6. Plant communities, interspersion, microtopography.  Metric 6. Plant communities. Score all present using 0 to 3 scale.  Aquatic bed Aquatic						
Known occurrence stateflederal threatened or endangered species (10)   Significant migratory songhid/water fowt hebitat or usage (10)   Category 1 Welland. See Question 5 Qualitative Rating (10)   Metric 6. Plant communities, interspersion, microtopography.    6a. Wethand Vegetation Communities.   Score all present using 0 to 3 scale.   Aquatic bed   Emergent   Shrub						
Significant migratory sonaphirdwater fow habitat or usage (10)				. (40)		
Category 1   Westand See Question 5 Qualitative Rating (-10)				cies (10)		
### Some all present using 0 to 3 scale.    Score all present using 0 to 3 scale.						
Score all present using 0 to 3 scale.  Aquatic bed 1 Emergent Sirub 1 Emer		1 18	Metric 6. Plant communities, interspers	sion, microtopography.		
Score all present using 0 to 3 scale.  Aquatic bed 1 Emergent Sirub 1 Emer	max 20pts.	subtotal	6a. Wetland Vegetation Communities.	Vegetation Community Cove	er Scale	
Temergent   Shrub   Shrub   Shrub   Forest   Shrub   Forest   Mudflats   Vegetation and is of of moderate quality, or comprises a significant part of wetland's 2 vegetation and is of of moderate quality or comprises a small part and is of high quality   Present and comprises significant part, or more, of wetland's 3 vegetation and is of of moderate quality or comprises a small part and is of high quality   Present and comprises significant part, or more, of wetland's 3 vegetation and is of high quality   Vegetation and is of h	·					
Shrub Forest Forest Mudflats Open water Other Sh. horizontal (plan view) Interspersion. Select only one. High (5) Moderately high(4) Moderately low (2) X Low (1) None (0) Sc. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-5) Moderatel >75% cover (-1) Noner (1) Absent (1) Sparse 5-25% cover (-1) Nearly absent -5% cover (-1) Nearly absent -5% cover (-1) Nearly absent -5% cover (-1) Sparse 5-25% cover (-1) Sparse 5-25% cover (-1) Sparse 5-25% cover (-1) Sparse 5-25% cover (-1) Sparse 1-25% cover (-1) S						
Forest Mudflats Open water Other Oth					or comprises a	
Mudflats   Open water   Open					nt part of wetland's 2	
Other   Sb. horizontal (plan view) Interspersion.   Select only one.   High (5)   Moderately high(4)   Moderately high(4)   Moderately how (2)   A Low (1)   Moderately how (2)   Moderately how (2)   A Low (1)   An interspersion of the vegetation and is of high quality   Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species   Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallywor presence of rare threatened or endangered spp to A predominance of native species with nonnative spp (and is the present of rare threatened or endangered spp to A predominance of native species diversity moderate to moderately high, but generallywor presence of rare threatened or endangered spp to A predominance of native species diversity moderate to moderately high, but generallywor presence of rare threatened or endangered spp to A predominance of native species diversity moderate to moderately high, but generallywor presence of rare threatened or endangered spp to A predominance of native species diversity moderate to moderately high, but generallywor presence of rare threatened or endangered spp to A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened or endangered spp to A predominance of native species, with nonnative species, with nonnative species, with nonnative species, with nonnative species and/or disturbance tolerant native species of rare threatened or endangered spp to A predominance of native species, with nonnative species of rare threatened or endangered spp to A predominance of native species, with nonnative species with nonnative species. In the vegetation, moderately high, but not always, the presence of rare, threatened, or endangered spp to A predominance of native species.						
6b. horizontal (plan view) interspersion. Select only one.  High (5) Moderately high(4) Moderately (3) Moderately low (2) X Low (1) None (0) 6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Moderate 25-75% cover (-1) Nearly absent (-5) Absent (7) Moderate (7) Moderate (7) Moderate (8) Moderate (8) Moderate (9)						
Select only one.  High (5) Moderately high(4) Moderately high(4) Moderate (3) Moderate (3) Moderately low (2) X Low (1) None (0) None (0) Extensive > 75% cover (-5) Moderate 25-75% cover (-5) Moderate 25-75% cover (-1) Nearry absent < 5% cover (0) Absent (1) Gd. Microtopography. Score all present using 0 to 3 scale. Vegetated hummucks/tussucks Coarse woody debits > 15cm (6in) Standing dead > 25cm (10in) dbh Amphibian breeding pools  Category 1  Berkensive 178% cover (-1) Standing dead > 25cm (10in) dbh Amphibian breeding pools  GRAND TOTAL(max 100 pts)  Narrative Description of Vegetation Quality Low spp diversity and/or predominance of nonative or low disturbance tolerant native spp becies (disturbance tolerant native spp becies diversity moderate to moderately high, but generallywo presence of rare threatened or endangered spp to a librough nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  Midflat and Open Water Class Quality  Moderate 1 to -4ha (2.47 to 9.88 acres) or more  All Present very small amounts or if more common of marginal quality or in small amounts of highest quality or in small amounts or in moderate or greater amounts					, or more, of wetland's 3	
High (5)  Moderately high(4)  Moderately (3)  Moderately low (2)  Low (1)  None (0)  6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage  Extensive >75% cover (-5)  Moderate 25-75% cover (-1)  Nearly absent (1)  Absent (1)  6d. Microtopography.  Score all present using 0 to 3 scale.  Vegetated hummucks/tussucks  Coarse woody debris >15cm (6in)  Standing dead >25cm (10in) dth  Amphibian breeding pools  Category 1  GRAND TOTAL(max 100 pts)  Moderate (3)  Narrative Description of Vegetation Quality  Low spp diversity and/or pedominance of nonnative onlow disturbance tolerant native species  Narive spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to threatened or endangered spp to address the presence of rare, threatened, or endangered spp to absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  Mudflat and Open Water Class Quality  Absent <0.1 ha (0.247 acres)  Vegetated hummucks/tussucks  Coarse woody debris >15cm (6in)  Standing dead >25cm (10in) dth  Amphibian breeding pools  Microtopography Cover Scale  O O Absent  Present in moderate amounts, but not of highest quality or in small amounts of highest quality  Present in moderate or greater amounts				vegetation and is of high quality		
Moderate (3)				Narrative Description of Vegetation 0	Quality	
Moderately low (2)					of nonnative or low	
Low (1)   Although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to an also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to an also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to a predominance of native species, with nonnative sph high and/or disturbance tolerant native spa besence of rare threatened or endangered spp to a predominance of native species, with nonnative sph high and/or disturbance tolerant native spa besence of rare threatened or endangered spp to a predominance of native species, with nonnative sph high and/or disturbance tolerant native spa besence of rare threatened or endangered spp to a predominance of native species, with nonnative sph high and/or disturbance tolerant native spa besence of rare threatened or endangered spp to a predominance of native species, with nonnative sph high and/or disturbance tolerant native spa besence of rare threatened or endangered spp to a predominance of native species, with nonnative sph high and/or disturbance tolerant native spa besence of rare threatened or endangered spp to a predominance of native species, with nonnative sph high and/or disturbance tolerant native spa besence of rare threatened or endangered spp to a predominance of native species, with nonnative sph high and/or disturbance tolerant native spa besence of rare threatened or endangered spp to a predominance of native species, with nonnative sph high and/or disturbance of native species, with nonnative sph high and/or disturbance of native species, with nonnative sph light and/or disturbance of native species, with nonnative sph high and/or disturbance of native species, with nonnative sph species, with nonnative sph species, with nonnative sph species, with nonnative sph species, with nonn					the vegetation med	
None (0)   Gc. Coverage of invasive plants. Refer						
Table 1 ORAM long form for list. Add or deduct points for coverage  Extensive >75% cover (-5)  Moderate 25-75% cover (-3)  X Sparse 5-25% cover (-1)  Nearly absent <5% cover (0)  Absent (1)  6d. Microtopography.  Score all present using 0 to 3 scale.  Vegetated hummucks/tussucks  Coarse woody debris >15cm (6in)  Standing dead >25cm (10in) dbh  Amphibian breeding pools  Category 1  Table 1 ORAM long form for list. Add or deduct points for coverage  A predominance of native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative spp high and/or disturbance of native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative spp high and/or disturbance tolerant native species, with nonnative species, with nonnative spp high and/or disturbance tolerant native species, with nonnative species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent and/or disturbance tolerant native spp absent or virtually absent and/or disturbance tolerant native species, with nonnative species, with nonnative species, with nonnative species, with nonnative species, with noncative species.				•		
or deduct points for coverage  Extensive >75% cover (-5)  Moderate 25-75% cover (-3)  X Sparse 5-25% cover (-1)  Nearly absent <5% cover (0)  Absent (1)  6d. Microtopography.  Score all present using 0 to 3 scale.  Vegetated hummucks/tussucks  Coarse woody debris >15cm (6in)  Standing dead >25cm (10in) dbh  Amphibian breeding pools  Category 1  18 GRAND TOTAL(max 100 pts)  A predominance of native species, with nonnative spp high and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  0 Absent <0.1ha (0.247 acres)  1 Low 0.1 to <1ha (0.247 to 2.47 acres)  2 Moderate 1 to <4ha (2.47 to 9.88 acres) or more  Microtopography Cover Scale  0 0 Absent  1 Present very small amounts or if more common of marginal quality  2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality  3 Present in moderate or greater amounts					ence of rare	
Extensive >75% cover (-5)  Moderate 25-75% cover (-3)  Sparse 5-25% cover (-1)  Nearly absent <5% cover (0)  Absent (1)  6d. Microtopography.  Score all present using 0 to 3 scale.  Vegetated hummucks/tussucks Coarse woody debris >15cm (6in)  Standing dead >25cm (10in) dbh Amphibian breeding pools  Category 1  Category 1  Extensive >75% cover (-5)  Moderate 25-75% cover (-7)  Phalaris arundinace  And high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp  Mudflat and Open Water Class Quality  0   Absent <0.1 ha (0.247 acres)  1   Low 0.1 to <1ha (0.247 to 2.47 acres)  2   Moderate 1 to <4ha (2.47 to 9.88 acres) or more  Microtopography Cover Scale  0   0   Absent  1   Present very small amounts or if more common of marginal quality  2   Present in moderate amounts, but not of highest quality or in small amounts of highest quality  3   Present in moderate or greater amounts					nonnativo enn high	
Moderate 25-75% cover (-3)						
Nearly absent <5% cover (0)  Absent (1)  6d. Microtopography. Score all present using 0 to 3 scale. Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools  Category 1  RAPAND TOTAL(max 100 pts)  Mudflat and Open Water Class Quality  0 Absent <0.1ha (0.247 acres) 1 Low 0.1 to <1ha (0.247 to 2.47 acres) 2 Moderate 1 to <4ha (2.47 to 9.88 acres) 3 High 4ha (9.88 acres) or more  Microtopography Cover Scale  0 Absent 1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality  3 Present in moderate or greater amounts					•	
Absent (1)  6d. Microtopography. Score all present using 0 to 3 scale. Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools  Category 1  Mudflat and Open Water Class Quality 0   Absent <0.1 ha (0.247 acres) 1   Low 0.1 to <1ha (0.247 to 2.47 acres) 2   Moderate 1 to <4ha (2.47 to 9.88 acres) 3   High 4ha (9.88 acres) or more  Microtopography Cover Scale 0   0   Absent 1   Present very small amounts or if more common of marginal quality 2   Present in moderate amounts, but not of highest quality or in small amounts of highest quality  18   GRAND TOTAL(max 100 pts)  3   Present in moderate or greater amounts				the presence of rare, threatened, or end	dangered spp	
6d. Microtopography. Score all present using 0 to 3 scale.  Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools  Microtopography Cover Scale  0 0 Absent Microtopography Cover Scale  1 Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality  18 GRAND TOTAL(max 100 pts)  3 Absent <0.1ha (0.247 to 2.47 acres) 1 Low 0.1 to <1ha (0.247 to 2.47 acres)  Microtopography Cover Scale  0 0 Absent  1 Present very small amounts or if more common of marginal quality 2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality				Mudflat and Open Water Class Quali	itv	
Score all present using 0 to 3 scale.  Vegetated hummucks/tussucks Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools  Microtopography Cover Scale  O D Absent Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality  RAND TOTAL (max 100 pts)  Score all present using 0 to 3 scale.  Low 0.1 to <1ha (0.247 to 2.47 acres) Moderate 1 to <4ha (2.47 to 9.88 acres)  Microtopography Cover Scale  Absent Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality or in small amounts of highest quality  Present in moderate or greater amounts					•9	
Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools  Microtopography Cover Scale  O			Score all present using 0 to 3 scale.	Low 0.1 to <1ha (0.247 to 2.47 acres)		
Standing dead >25cm (10in) dbh Amphibian breeding pools    O					<u>s)</u>	
Amphibian breeding pools    Microtopography Cover Scale   0				High 4na (9.88 acres) or more		
1   Present very small amounts or if more common of marginal quality   2   Present in moderate amounts, but not of highest quality or in small amounts of highest quality   3   Present in moderate or greater amounts   3   3   3   3   3   3   3   3   3				Microtopography Cover Scale		
Category 1  Category 1  18 GRAND TOTAL(max 100 pts)  Of marginal quality Present in moderate amounts, but not of highest quality quality or in small amounts of highest quality  Present in moderate or greater amounts			0_0	Absent		
Category 1  2 Present in moderate amounts, but not of highest quality or in small amounts of highest quality  18 GRAND TOTAL(max 100 pts)  3 Present in moderate or greater amounts			1		common	
Category 1     quality or in small amounts of highest quality       18 GRAND TOTAL(max 100 pts)     3 Present in moderate or greater amounts					of highest	
	Category 1		-			
		18 GRANI	TOTAL(max 100 pts)	Present in moderate or greater amount	is	
				and of highest quality		

ORAM-wetland 2.xlsm | test\_Field 5/16/2022

# **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 MO	If yes, Category 1.
	Question 6. Bogs	YES MO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES MO	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 MO	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	
<b>y</b>	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	3	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE	18	Category based on score breakpoints 1

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	<b>©</b>	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 overcategorized 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	0	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?	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	<b>©</b>	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	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category					
Choose one	( Category 1 )	Category 2	Category 3		

**End of Ohio Rapid Assessment Method for Wetlands.** 

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization			
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001		

### Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

## **Background Information**

Name: Charlotte Stallone

Date: 5/10/2022

Affiliation:

**AECOM** 

Address: 564 White Pond drive, Akron OH 44320

Phone Number: 717-617-7738

e-mail address:

charlotte.stallone@aecom.com

Name of Wetland: W-CMS-003

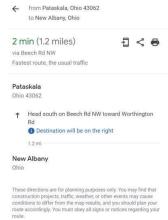
Vegetation Communit(ies):

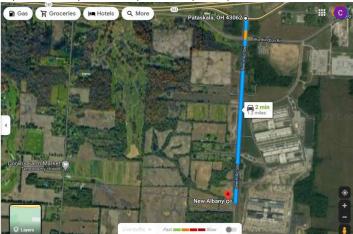
PEM

HGM Class(es):

Depressional

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





Lat/Long or UTM Coordinate 40.061164, -82.75579	
USGS Quad Name New ALbany	
County Licking	
Township New Albany	
Section and Subsection NA	
Hydrologic Unit Code 050600011503	
Site Visit 5/10/2022	
National Wetland Inventory Map NA	
Ohio Wetland Inventory Map	
Soil Survey	
Delineation report/map	

Name of Wetland:

W-CMS-003

Wetland Size (acres, hectares): 0.316 acres

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





#### Comments, Narrative Discussion, Justification of Category Changes:

The portion within the study area was found to consist of a PEM community. Area used as an access for construction of storm water retention pond and substation. Soils have been compacted. Compaction prevents water from percolating properly through the soil and affects hydrology, vegetation has been removed. Wetland is dominated by flat topped goldenrod, reed canary grass, and sallow sedge.

Final score : 21 Category:

### **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.	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.		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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. 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	
2	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2  YES	Go to Question 2
	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 Database as a high quality wetland?	YES 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 regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES 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 hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES  Wetland is a Category 1 wetland  Go to Question 6	Go to Question 6
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or 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%?	YES 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 most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible	Go to Question 9a
	ulameters greater trian 450m (17.7m) don:	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	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?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible	Go to Question 9c
	The state of the s	Category 3 status	
		Go to Question 10	
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	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These	Go to Question ou	Co to Question to
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category	Go to Question 9e
	native species can also be present:	3 wetland	Oo to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		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	YES	NO
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	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.		
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	YES	NO
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	evaluated for possible Category 3 status	Quantitative Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 5 status	Natility
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum	•	Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		_
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

#### Wetland 3

Site: Anguin	138kV Extension	No 4/Anguin-Brie 138kV R0 Rater(s): C.Stallone	е	Date:	5/10/2022
			Field Id:	-	
	2 2	Metric 1. Wetland Area (size).	W-CMS-003		
		<b>-</b>			
max 6 pts	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts)	0.316 acre	es delineated within survey a	area
		25 to <50 acres (10.1 to <20.2ha) (5 pts)	0.010		
		10 to <25 acres (4 to <10.1ha) (4 pts)			
		3 to <10 acres (1.2 to <4ha) (3 pts)			
		x 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)			
		<0.1 acres (0.04ha) (0 pts)			
	1 3	Metric 2. Upland buffers and surro	ounding land use.		
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one a	and assign score. Do not double check.		
		WIDE. Buffers average 50m (164ft) or more around wet			
		MEDIUM. Buffers average 25m to <50m (82 to <164ft) a			
		NARROW. Buffers average 10m to <25m (32ft to <82ft) x VERY NARROW. Buffers average <10m (<32ft) around			
		2b. Intensity of surrounding land use. Select one or			
		VERY LOW. 2nd growth or older forest, prairie, savanna	_		
		LOW. Old field (>10 years), shrubland, young second gi			
		MODERATELY HIGH. Residential, fenced pasture, park	c, conservation tillage, new fallow field. (3)	)	
		x HIGH. Urban, industrial, open pasture, row cropping, mi	ning, construction. (1)		
	14.0 17.0	Metric 3. Hydrology.			
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply.	3b. Connectivity. Score all the	at apply.	
		High pH groundwater (5)	100 year floodplain (1)		
		Other groundwater (3)	x Between stream/lake and other	` '	
		x Precipitation (1) Seasonal/Intermittent surface water (3)	Part of wetland/upland (e.g. for x Part of riparian or upland corrid		
		x Perennial surface water (lake or stream) (5)	3d. Duration inundation/satur	` '	eck.
		3c. Maximum water depth. Select one.	x Semi- to permanently inundated		
		>0.7 (27.6in) (3)	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 3	30cm (12in) (1)	
		3e. Modifications to natural hydrologic regime. Scor		, (.,	
		None or none apparent (12)	Check all disturbances obser	-	
		Recovered (7) Recovering (3)	ditch tile x	point source (nonstormwat filling/grading	ter)
		x Recent or no recovery (1)	dike X		used as an access rd
			weir	dredging	and staging area
		_	stormwater input	Other:	
	3 20	Metric 4. Habitat Alteration and De	velopment.		
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double chec	ck and average.		
		None or none apparent (4) Recovered (3)			
		Recovering (2)			
		x Recent or no recovery (1)			
		4b. Habitat development. Select only one and assign	score.		
		Excellent (7) Very good (6)			
		Good (5)			
		Moderately good (4)			
		Fair (3) Poor to fair (2)			
		x Poor (1)			
		4c. Habitat alteration. Score one or double check and	d average.		
		None or none apparent (9)	Check all disturbances observe	_	
		Recovered (6) Recovering (3)	mowing grazing	shrub/sapling removal herbaceous/aquatic bed re	emoval
		x Recent or no recovery (1)	x clearcutting	sedimentation	ovai
			selective cutting	dredging	
			x woody debris removal x toxic pollutants	farming	
		ล	LUXIC POHUIAITIS	nutrient enrichment	
	20				
	subtotal this	s page ORAM v. 5.0 Field Form Quantitative Rating			

ORAM-wetland 3.xlsm | test\_Field 7/7/2022

Site: Angu	uin 138kV	Extension No 4/AnguRater(s): C.Stallone	Date:	5/10/2022
		Field Id:		
	20	W-CMS-003		
	subtotal this	page		
	0 20	Metric 5. Special Wetlands.		
max 10 pts.	subtotal	Check all that apply and score as indicated.		
		Bog (10) Fen (10)		
		Old growth forest (10)		
		Mature forested wetland (5)		
		Lake Erie coastal/tributary wetland-unrestricted hydrology (10)  Lake Erie coastal/tributary wetland-restricted hydrology (5)		
		Lake Plain Sand Prairies (Oak Openings) (10)		
		Relict Wet Praires (10)  Known occurrence state/federal threatened or endangered species (10)		
		Significant migratory songbird/water fowl habitat or usage (10)		
	1 21	Category 1 Wetland. See Question 5 Qualitative Rating (-10)		
	1 21		0 1	
max 20pts.	subtotal	<b>6a. Wetland Vegetation Communities.</b> Score all present using 0 to 3 scale.  Vegetation Community Co Absent or comprises <0.1ha (0.2471		
		0 Aquatic bed 1 Present and either comprises small p		
		1 Emergent vegetation and is of moderate quality	or comprises a	
		0     Shrub     significant part but is of low quality       0     Forest     2     Present and either comprises significant part but is of low quality	ant part of wetland's 2	
		0 Mudflats vegetation and is of moderate quality		
		0 Open water     part and is of high quality       0 Other     3 Present and comprises significant part	t or more of wetland's 3	
		6b. horizontal (plan view) Interspersion. vegetation and is of high quality	t, or more, or weating o	
		Select only one.    High (5)   Narrative Description of Vegetation	Quality	
		Moderately high(4)  Low spp diversity and/or predominan		
		Moderate (3) disturbance tolerant native species  Moderately low (2) Native spp are dominant component	of the vegetation, mod	
		x Low (1) although nonnative and/or disturbance		
		None (0) can also be present, and species dive		
		6c. Coverage of invasive plants. Refer moderately high, but generallyw/o pre Table 1 ORAM long form for list. Add threatened or endangered spp to	sence of rare	
		or deduct points for coverage  A predominance of native species, w		
		Extensive >75% cover (-5)  Moderate 25-75% cover (-3)  Phalaris arundinace  and/or disturbance tolerant native spr absent, and high spp diversity and of	•	
		x Sparse 5-25% cover (-1) the presence of rare, threatened, or experience of the presence of t		
		Nearly absent <5% cover (0) Absent (1) Mudflat and Open Water Class Qua	lity	
		6d. Microtopography. 0 Absent <0.1ha (0.247 acres)		
		Score all present using 0 to 3 scale.  1 Low 0.1 to <1ha (0.247 to 2.47 acres)  Vegetated hummucks/tussucks  2 Moderate 1 to <4ha (2.47 to 9.88 acres)		
		0 Coarse woody debris >15cm (6in)  3 High 4ha (9.88 acres) or more	:5)	
		O Standing dead >25cm (10in) dbh		
		O Amphibian breeding pools  Microtopography Cover Scale  O O Absent		
		Present very small amounts or if more	common	
		of marginal quality 2 Present in moderate amounts, but no	of highest	
Category 1		quality or in small amounts of highest	•	
	21 GRAN	D TOTAL(max 100 pts)  3 Present in moderate or greater amou	nts	
		and of highest quality		

ORAM-wetland 3.xlsm | test\_Field 7/7/2022

# **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 MO	If yes, Category 1.
	Question 6. Bogs	YES MO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES MO	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	
g	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	14	
	Metric 4. Habitat	3	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE	21	Category based on score breakpoints 1

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	<b>©</b>	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 overcategorized 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	0	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?	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	<b>©</b>	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	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category				
Choose one	( Category 1 )	Category 2	Category 3	

**End of Ohio Rapid Assessment Method for Wetlands.** 

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization		
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001	

### Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

## **Background Information**

Name: Charlotte Stallone

Date: 5/10/2022

Affiliation:

**AECOM** 

Address: 564 White Pond drive, Akron OH 44320

Phone Number: 717-617-7738

e-mail address:

charlotte.stallone@aecom.com

Name of Wetland: W-CMS-004

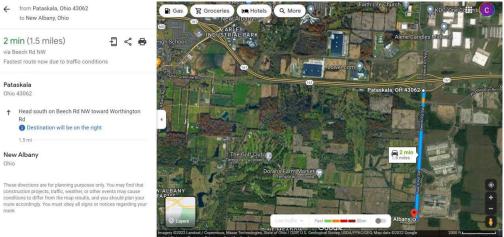
Vegetation Communit(ies):

PEM

HGM Class(es):

Depressional

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



Lat/Long or UTM Coordinate 40.057356, -82.75558	
USGS Quad Name New ALbany	
County	
Township New Albany	
Section and Subsection NA	
Hydrologic Unit Code 050600011503	
Site Visit 5/10/2022	
National Wetland Inventory Map NA	
Ohio Wetland Inventory Map	
Soil Survey	
Delineation report/map	

Name of Wetland:

W-CMS-004

Wetland Size (acres, hectares): 0.105 acres

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





### Comments, Narrative Discussion, Justification of Category Changes:

The portion within the study area was found to consist of a PEM community. Active agricultural field, receiving excess hydrology from adjacent construction wash out stations. Wetland dominated by New England Aster.

Final score : 12 Category:

### **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.	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.		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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. 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	
2	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2  YES	Go to Question 2
	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 Database as a high quality wetland?	YES 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 regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES 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 hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES  Wetland is a Category 1 wetland  Go to Question 6	Go to Question 6
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or 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%?	YES 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 most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	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?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO I
	prevent erosion and the loss of aquatic plants, i.e. the wetland is		
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible Category 3 status	
		Oalogory 5 Status	
		Go to Question 10	
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	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Quodion ou	Co to Quodion 10
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
9d	wetlands, or those dominated by submersed aquatic vegetation.  Does the wetland have a predominance of native species within its	YES	NO
Ju	vegetation communities, although non-native or disturbance tolerant	TES	INO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		
	characterized by the following description: the wetland has a sandy	Wetland is a Category 3 wetland.	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	5 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	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.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete Quantitative
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	evaluated for possible Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	23.090.700.000	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumi
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwelli
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsi
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 alatun
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianun
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceun
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddelli
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: Anguin-Brie 138kV R0	Rater(s): C.Stallone	9	Date:	5/10/2022
	, ,	Field Id:		
1	Metric 1. Wetland Area (size).	W-CMS-004		
max 6 pts subtotal	Select one size class and assign score.			
	>50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.105	acres delineated within survey area	a
1 1	2 Metric 2. Upland buffers and surro	unding land use.		
max 14 pts. subtotal	2a. Calculate average buffer width. Select only one a WIDE. Buffers average 50m (164ft) or more around wet MEDIUM. Buffers average 25m to <50m (82 to <164ft) a NARROW. Buffers average 10m to <25m (32ft to <82ft) X VERY NARROW. Buffers average <10m (<32ft) around 2b. Intensity of surrounding land use. Select one or of VERY LOW. 2nd growth or older forest, prairie, savanna LOW. Old field (>10 years), shrubland, young second gr MODERATELY HIGH. Residential, fenced pasture, park	land perimeter (7) around wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) double check and average. ah, wildlife area, etc. (7) owth forest. (5) a, conservation tillage, new fallow f		
	X HIGH. Urban, industrial, open pasture, row cropping, mi	ning, construction. (1)		
6.0 8.0				
max 30 pts. subtotal	3a. Sources of Water. Score all that apply.  High pH groundwater (5) Other groundwater (3)  x Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select one. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (415.7in) (1) 3e. Modifications to natural hydrologic regime. Scor. None or none apparent (12) Recovered (7) Recovering (3) x Recent or no recovery (1)  Metric 4. Habitat Alteration and De	Semi- to permanently inc x Regularly inundated/satt Seasonally inundated (2) Seasonally saturated in e one or double check and avera Check all disturbances ditch title dike weir stormwater input	d other human use (1) e.g. forest), complex (1) d corridor (1) n/saturation. Score one or dbl chec undated/saturated (4) urated (3) ) upper 30cm (12in) (1) age. observed point source (nonstormwater) x filling/grading Sid	le walk and culvert talled in 2021 construction
max 20 pts. subtotal	4a. Substrate disturbance. Score one or double chec	-	wash out and verilore	wash stations
	None or none apparent (4) Recovered (3) Recovering (2) X Recent or no recovery (1) 4b. Habitat development. Select only one and assign Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. Score one or double check and None or none apparent (9) Recovered (6) Recovering (3) X Recent or no recovery (1)	score.	sbserved shrub/sapling removal herbaceous/aquatic bed remo sedimentation dredging x farming nutrient enrichment	oval
1 subtotal th	1] is page ORAM v. 5.0 Field Form Quantitative Rating			

ORAM-wetland 4.xlsm | test\_Field 5/16/2022

Site: Ang	uin-Brie 13	8kV R0	Rater(s): (	C.Stallone		Date:	5/10/2022
			. ,		Field Id:		
	11				W-CMS-004		
	subtotal this	page					
	0 11	Metric 5. Spe	cial Wetlands	S.			
max 10 pts.	subtotal	Check all that a	oply and score	as indicated.			
		Bog (10)	. •				
		Fen (10) Old growth forest (10)					
		Mature forested wetla	nd (5)				
		Lake Erie coastal/tribu	, ,	icted hydrology (10)			
		Lake Erie coastal/tribu	,	, ,,			
		Lake Plain Sand Prair Relict Wet Praires (10		(10)			
		Known occurrence sta		d or endangered spec	cies (10)		
		Significant migratory s	ongbird/water fowl h	abitat or usage (10)	. ,		
	41 40	Category 1 Wetland.					
	1 12	wetric 6. Plan	t communiti	es, interspers	sion, microtopography.		
max 20pts.	subtotal	6a. Wetland Veg			Vegetation Community Cov		
		Score all present usin Aquatic bed	g 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 a		
		1 Emergent		'	vegetation and is of moderate quality,		
		Shrub			significant part but is of low quality	,	
		Forest		2	Present and either comprises significa		
		Mudflats Open water			vegetation and is of moderate quality part and is of high quality	or comprises a small	
		Other		3	Present and comprises significant par	t, or more, of wetland's 3	
		6b. horizontal (plan v	iew) Interspersion.		vegetation and is of high quality	, ,	
		Select only one.			Narrative Description of Vagetation	Quality	
		High (5) Moderately high(4)			Narrative Description of Vegetation Low spp diversity and/or predominant		
		Moderate (3)			disturbance tolerant native species		
		Moderately low (2)			Native spp are dominant component of		
		x Low (1)			although nonnative and/or disturbance		
		None (0) 6c. Coverage of inva	sive plants. Refer		can also be present, and species dive moderately high, but generallyw/o pre-		
		Table 1 ORAM long for			threatened or endangered spp to		
		or deduct points for co			A predominance of native species, with		
		Extensive >75% cove Moderate 25-75% cov	, ,	ypha angustifolia	and/or disturbance tolerant native spp absent, and high spp diversity and often	•	
		x Sparse 5-25% cover (		ypria arigustirolia	the presence of rare, threatened, or el		
		Nearly absent <5% co	ver (0)				
		Absent (1)		0	Mudflat and Open Water Class Qua	lity	
		6d. Microtopography Score all present usin		1	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks		2	Moderate 1 to <4ha (2.47 to 9.88 acre	s)	
		Coarse woody debris		3	High 4ha (9.88 acres) or more		
		Standing dead >25cm Amphibian breeding p	. ,		Microtopography Cover Scale		
		Amphibian breeding p	5013	0 0	Absent		
				1		common	
					of marginal quality	of highest	
Category 1				2	Present in moderate amounts, but not quality or in small amounts of highest		
	12 GRANI	D TOTAL(max 100 pts	)	3	· · ·	· · · · · · · · · · · · · · · · · · ·	
	J.KAN	5 manian 100 pte	,	3			
					and of highest quality		

ORAM-wetland 4.xlsm | test\_Field 5/16/2022

# **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 MO	If yes, Category 1.
	Question 6. Bogs	YES MO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES MO	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	
J	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	5	
	Metric 4. Habitat	3	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE	12	Category based on score breakpoints 1

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	<b>©</b>	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 overcategorized 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	0	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?	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	<b>©</b>	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	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category					
Choose one	( Category 1 )	Category 2	Category 3		

**End of Ohio Rapid Assessment Method for Wetlands.** 

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization			
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001		

#### Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

## **Background Information**

Name: Charlotte Stallone

Date: 5/11/2022

Affiliation:

**AECOM** 

Address: 564 White Pond drive, Akron OH 44320

Phone Number: 717-617-7738

e-mail address:

charlotte.stallone@aecom.com

Name of Wetland: W-CMS-005

Vegetation Communit(ies): PEM/PFO

HGM Class(es):

Depressional

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



Lat/Long or UTM Coordinate 40.057432, -82.751724	
USGS Quad Name New ALbany	
County	
Township New Albany	
Section and Subsection NA	
Hydrologic Unit Code 050600011503	
Site Visit 5/11/2022	
National Wetland Inventory Map NA	
Ohio Wetland Inventory Map	
Soil Survey	
Delineation report/map	

Name of Wetland:

W-CMS-005

Wetland Size (acres, hectares): 0.164 acres

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





#### Comments, Narrative Discussion, Justification of Category Changes:

The portion within the study area was found to consist of a PEM/PFO community. Forested wetland dominated by box elder, black locust, red maple, American elm, spotted touch-me-not, flat topped goldenrod and yellow avens. Emergent wetland dominated by fowl bluegrass, spotted touch-me-not, and fox sedge. Previously farmed.

Final score: 50 Category: 2

### **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.	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.		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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. 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	
2	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2  YES	Go to Question 2
	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 Database as a high quality wetland?	YES 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 regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES 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 hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES  Wetland is a Category 1 wetland  Go to Question 6	Go to Question 6
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or 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%?	YES 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 most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible	Go to Question 9a
	ulameters greater trian 450m (17.7m) don:	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	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?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible	Go to Question 9c
	The state of the s	Category 3 status	
		Go to Question 10	
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	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These	Go to Question ou	Co to Question to
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category	Go to Question 9e
	native species can also be present:	3 wetland	Oo to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		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	YES	NO
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	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.		
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	YES	NO
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	evaluated for possible Category 3 status	Quantitative Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 5 status	Natility
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: Anguin-	-Brie 138kV R0/Bi	rie Substation	Rater(s): C.Stallo	one	Date:	5/11/2022
				Field Id:	<u> </u>	
	1 ′	1 Metric 1. \	Netland Area (size).	W-CMS-005		
max 6 pts	subtotal	Select one size	class and assign score.			
		>50 acres (>20.	, ,	0.164	acres delineated within survey area	
			(10.1 to <20.2ha) (5 pts) (4 to <10.1ha) (4 pts)			
			1.2 to <4ha) (3 pts)			
			(0.12 to <1.2ha) (2pts)			
		<0.1 acres (0.04	s (0.04 to <0.12ha) (1 pt) lha) (0 pts)			
	8 9	Metric 2. U	Jpland buffers and sur	rounding land use.		
max 14 pts.	subtotal	2a. Calculate a	verage buffer width. Select only or	ne and assign score. Do not double c	heck.	
			verage 50m (164ft) or more around			
			rs average 25m to <50m (82 to <164 ers average 10m to <25m (32ft to <8			
			V. Buffers average <10m (<32ft) aro			
		2b. Intensity of	surrounding land use. Select one	or double check and average.		
			d growth or older forest, prairie, sava			
			>10 years), shrubland, young secon	d growth forest. (5) bark, conservation tillage, new fallow fie	old (3)	
			dustrial, open pasture, row cropping,	•	Sid. (5)	
	12.5 21.5	Metric 3. I	Hydrology.			
max 30 pts.	subtotal		Water. Score all that apply.	3b. Connectivity. Score a	all that apply.	
·		High pH ground		100 year floodplain (1)	,	
		Other groundwa x Precipitation (1)		Between stream/lake and x Part of wetland/upland (e.		
			nittent surface water (3)	x Part of wetland/upland (e.g. Part of riparian or upland of		
		Perennial surface	ce water (lake or stream) (5)	3d. Duration inundation/	saturation. Score one or dbl check.	
		>0.7 (27.6in) (3)	vater depth. Select one.	Semi- to permanently inur Regularly inundated/satura		
		0.4 to 0.7m (15.		x Seasonally inundated (2)		
		x <0.4m (<15.7in)		Seasonally saturated in up core one or double check and average		
		x None or none a		Check all disturbances of		
		Recovered (7)		ditch	x point source (nonstormwater)	
		x Recovering (3) Recent or no rec	covery (1)	tile dike	filling/grading road bed/RR track	
			, ,	weir	dredging	
		_		stormwater input	Other:	
	14.5	6 Metric 4. I	Habitat Alteration and I	Development.		
max 20 pts.	subtotal	4a. Substrate d	listurbance. Score one or double c	heck and average.		
		Recovered (3)	Sparoni (1)			
		Recovering (2)	novem (4)			
		x Recent or no rec	elopment. Select only one and ass	sign score.		
		Excellent (7)				
		x Very good (6) Good (5)				
		Moderately good	d (4)			
		Fair (3)				
		Poor to fair (2) Poor (1)				
		4c. Habitat alte	ration. Score one or double check			
		x None or none ap Recovered (6)	oparent (9)	Check all disturbances ob mowing	served shrub/sapling removal	
		x Recovering (3)		grazing	herbaceous/aquatic bed remova	al
		Recent or no rec	covery (1)	clearcutting	sedimentation	
				selective cutting woody debris removal	dredging x farming	
		_		toxic pollutants	nutrient enrichment	
	36	6		<del></del>		
	subtotal thi	s page ORAM v. 5.0 Fie	eld Form Quantitative Rating			

ORAM-wetland 5.xlsm | test\_Field 5/16/2022

Site: Ano	guin-Brie	138k\	V R0/Brie Substat Rater(s): C.Stal	lone		Date:	5/11/2022
					Field Id:		
		36			W-CMS-005		
	<u> </u>						
		I this page					
	0	36	Metric 5. Special Wetlands.				
max 10 pts.	subtota	al	Check all that apply and score as ind	licated.			
			Bog (10)				
			Fen (10)				
		_	Old growth forest (10)  Mature forested wetland (5)				
		-	Lake Erie coastal/tributary wetland-unrestricted hy	drology (10)			
			Lake Erie coastal/tributary wetland-restricted hydro				
			Lake Plain Sand Prairies (Oak Openings) (10)				
			Relict Wet Praires (10)		(4.5)		
		<u> </u>	Known occurrence state/federal threatened or end Significant migratory songbird/water fowl habitat or		es (10)		
			Category 1 Wetland. See Question 5 Qualitative R				
	14	50	Metric 6. Plant communities, in		ion, microtopography.		
max 20pts.	subtota	al.	6a. Wetland Vegetation Communities	•	Vegetation Community Cove	er Scale	
max zopis.	Subiole	ai	Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 ad		
			Aquatic bed	1	Present and either comprises small par		
		1			vegetation and is of moderate quality, o	r comprises a	
		_	Shrub		significant part but is of low quality		
		3	Forest Mudflats	2	Present and either comprises significant vegetation and is of moderate quality or		
		-	Open water		part and is of high quality	comprises a small	
			Other	3	Present and comprises significant part,	or more, of wetland's 3	
			6b. horizontal (plan view) Interspersion.		vegetation and is of high quality		
		_	Select only one. High (5)		Narrative Description of Vegetation C	Quality	
		×	Moderately high(4)		Low spp diversity and/or predominance		
			Moderate (3)		disturbance tolerant native species		
			Moderately low (2)		Native spp are dominant component of		
		_	Low (1)		although nonnative and/or disturbance		
			None (0)  6c. Coverage of invasive plants. Refer		can also be present, and species divers moderately high, but generallyw/o prese		
			Table 1 ORAM long form for list. Add		threatened or endangered spp to	51.00 01 10.0	
			or deduct points for coverage		A predominance of native species, with	nonnative spp high	
			Extensive >75% cover (-5)		and/or disturbance tolerant native spp a	•	
		-	Moderate 25-75% cover (-3) Phalaris a Sparse 5-25% cover (-1)	arundinace	absent, and high spp diversity and ofter the presence of rare, threatened, or end		
		×	Nearly absent <5% cover (0)		the presence of rare, uneatened, or end	aangerea spp	
			Absent (1)		Mudflat and Open Water Class Quality	ty	
			6d. Microtopography.		Absent <0.1ha (0.247 acres)		
		2	Score all present using 0 to 3 scale.		Low 0.1 to <1ha (0.247 to 2.47 acres)	\	
		2	3		Moderate 1 to <4ha (2.47 to 9.88 acres High 4ha (9.88 acres) or more	)	
		2		Ū	Trigit and (0.00 dolos) of more		
			Amphibian breeding pools		Microtopography Cover Scale		
					Absent		
				1	Present very small amounts or if more of marginal quality	common	
				2	Present in moderate amounts, but not o	of highest	
Category 2					quality or in small amounts of highest q		
	50 GR	AND TO	OTAL(max 100 pts)	3	Present in moderate or greater amounts	s	
			· · · · ·		and of highest quality		
					juna or riigirioot quality		

ORAM-wetland 5.xlsm | test\_Field 5/16/2022

# **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 MO	If yes, Category 1.
	Question 6. Bogs	YES MO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES MO	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	
3	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	12.5	
	Metric 4. Habitat	14.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	14	
	TOTAL SCORE	50	Category based on score breakpoints 2

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES  Wetland is categorized as a Category 3 wetland	<b>©</b>	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 overcategorized 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	<b>(10)</b>	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	0	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?	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	<b>(10)</b>	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	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category						
Choose one	Category 1	Category 2	Category 3			

**End of Ohio Rapid Assessment Method for Wetlands.** 

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization				
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001			

#### Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

## **Background Information**

Name: Charlotte Stallone

Date: 5/11/2022

Affiliation:

AECOM

Address: 564 White Pond drive, Akron OH 44320

Phone Number: 717-617-7738

e-mail address:

charlotte.stallone@aecom.com

Name of Wetland: W-CMS-006

Vegetation Communit(ies):

PFO

HGM Class(es):

Depressional

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



Lat/Long or UTM Coordinate 40.057109, -82.751783	
USGS Quad Name New Albany	
County	
Township New Albany	
Section and Subsection NA	
Hydrologic Unit Code 050600011503	
Site Visit 5/11/2022	
National Wetland Inventory Map NA	
Ohio Wetland Inventory Map	
Soil Survey	
Delineation report/map	

Name of Wetland:

W-CMS-006

Wetland Size (acres, hectares): 0.115 acres

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





#### Comments, Narrative Discussion, Justification of Category Changes:

The portion within the study area was found to consist of a PFO community. Forested wetland dominated by box elder, silver maple, red maple, American elm, spice bush, spotted touch-me-not and poison ivy.

Final score: 50 Category: 2

### **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.	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.		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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. 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	
2	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2  YES	Go to Question 2
	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 Database as a high quality wetland?	YES 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 regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES 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 hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES  Wetland is a Category 1 wetland  Go to Question 6	Go to Question 6
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or 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%?	YES 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 most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible	Go to Question 9a
	ulameters greater trian 450m (17.7m) don:	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	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?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible	Go to Question 9c
	The state of the s	Category 3 status	
		Go to Question 10	
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	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These	Go to Question ou	Co to Question to
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category	Go to Question 9e
	native species can also be present:	3 wetland	Oo to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		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	YES	NO
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	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.		
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	YES	NO
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	evaluated for possible Category 3 status	Quantitative Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 5 status	Natility
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site: Anguin-Brie 138kV R0	Rater(s): C.Stallone		Date:	5/11/2022
	1 (7	Field Id:		
1 1	Metric 1. Wetland Area (size).	W-CMS-006		
max 6 pts subtotal	Select one size class and assign score.			
	>50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	0.115 acre	es delineated within survey area	
14 15	Metric 2. Upland buffers and surrou	unding land use.		
	2a. Calculate average buffer width. Select only one an 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 VERY NARROW. Buffers average <10m (<32ft) around v 2b. Intensity of surrounding land use. Select one or dx VERY LOW. 2nd growth or older forest, prairie, savannah LOW. Old field (>10 years), shrubland, young second gro MODERATELY HIGH. Residential, fenced pasture, park, HIGH. Urban, industrial, open pasture, row cropping, mini	nd perimeter (7) ound wetland perimeter (4) stround wetland perimeter (1) vetland perimeter (0) <b>puble check and average.</b> 1, wildlife area, etc. (7) wth forest. (5) conservation tillage, new fallow field. (3)		
12.5 27.5	Metric 3. Hydrology.	ng, construction. (1)		
max 30 pts. subtotal	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. >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) Recovered (7) Recovering (3) Recent or no recovery (1)  Metric 4. Habitat Alteration and Dev	Semi- to permanently inundate Regularly inundated/saturated X Seasonally inundated (2) Seasonally saturated in upper one or double check and average. Check all disturbances obse ditch title dike weir stormwater input	er human use (1) rest), complex (1) dor (1) ration. Score one or dbl check. ed/saturated (4) (3) 30cm (12in) (1)	
46.5	4a. Substrate disturbance. Score one or double check  X None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign sexcellent (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.	ed shrub/sapling removal herbaceous/aquatic bed remov sedimentation dredging farming nutrient enrichment	al

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Site:	Anguin-Brie 138	kV R0	Rater(s): C.Stall	one		Date:	5/11/2022
					Field Id:		<u> </u>
	46.5				W-CMS-006		
	subtotal this pa	-	On a sial Matlamala				
	0 46.5		Special Wetlands.				
max 10 pts	. subtotal	Check all t	nat apply and score as indi	cated.			
		Bog (10)					
	_	Fen (10)	. (40)				
	-	Old growth fore Mature forester					
	-		tal/tributary wetland-unrestricted hyd	rology (10)			
	F		tal/tributary wetland-restricted hydrol				
			d Prairies (Oak Openings) (10)				
	_	Relict Wet Prai			ing (40)		
	-		nce state/federal threatened or enda ratory songbird/water fowl habitat or		es (10)		
			tland. See Question 5 Qualitative Ra				
	12 58.5	Metric 6.	Plant communities, int	erspers	ion, microtopography.		
max 20pts.	subtotal	6a. Wetland	d Vegetation Communities.		Vegetation Community Cove	er Scale	
	_	Score all prese	nt using 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 ac		
	_	Aquatic bed		1	Present and either comprises small par		
	-	Emergent Shrub			vegetation and is of moderate quality, o	r comprises a	
	-	3 Forest		2	significant part but is of low quality  Present and either comprises significant	t part of wetland's 2	
		Mudflats		_	vegetation and is of moderate quality or		
		Open water			part and is of high quality		
	L	Other	(alaa alaa ) lataana aralaa	3	Present and comprises significant part,	or more, of wetland's 3	
		Select only one	(plan view) Interspersion.		vegetation and is of high quality		
	<u> </u>	High (5)	•		Narrative Description of Vegetation 0	Quality	
		x Moderately hig	n(4)		Low spp diversity and/or predominance	of nonnative or low	
	_	Moderate (3)	(0)		disturbance tolerant native species	#h	
	-	Moderately low Low (1)	(2)		Native spp are dominant component of although nonnative and/or disturbance		
	-	None (0)			can also be present, and species divers		
			of invasive plants. Refer		moderately high, but generallyw/o prese	•	
			long form for list. Add		threatened or endangered spp to		
	Г	or deduct point			A predominance of native species, with		
	-	Extensive >75° Moderate 25-7	. ,		and/or disturbance tolerant native spp a absent, and high spp diversity and ofter	•	
	-	Sparse 5-25%			the presence of rare, threatened, or end		
		Nearly absent				•	
	L	x Absent (1)			Mudflat and Open Water Class Qualit	ty	
		6d. Microtopo	grapny. nt using 0 to 3 scale.	1	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)		
	Г	Vegetated hum	•		Moderate 1 to <4ha (2.47 to 9.88 acres	)	
	-		debris >15cm (6in)		High 4ha (9.88 acres) or more	,	
			>25cm (10in) dbh				
	L	Amphibian bre	eding pools	0 0	Microtopography Cover Scale		
					Absent Present very small amounts or if more	common	
					of marginal quality		
				2	Present in moderate amounts, but not of	•	
Categor					quality or in small amounts of highest q	uality	
	58.5 GRAND	TOTAL(max 10	00 pts)	3	Present in moderate or greater amounts	S	
					and of highest quality		

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# **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 MO	If yes, Category 1.
	Question 6. Bogs	YES MO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES MO	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 MO	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	
J	Metric 2. Buffers and surrounding land use	14	
	Metric 3. Hydrology	12.5	
	Metric 4. Habitat	19	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	12	
	TOTAL SCORE	58.5	Category based on score breakpoints 2

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES  Wetland is categorized as a Category 3 wetland	<b>©</b>	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 overcategorized 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	<b>(10)</b>	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	0	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?	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	<b>(10)</b>	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	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.

	Fi	nal Category	
Choose one	Category 1	Category 2	Category 3

**End of Ohio Rapid Assessment Method for Wetlands.** 

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization				
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001			

#### Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

## **Background Information**

Name: Charlotte Stallone

Date: 5/11/2022

Affiliation:

**AECOM** 

Address: 564 White Pond drive, Akron OH 44320

Phone Number: 717-617-7738

e-mail address:

charlotte.stallone@aecom.com

Name of Wetland: W-CMS-007

Vegetation Communit(ies):

PFO

HGM Class(es):

Depressional

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



Lat/Long or UTM Coordinate 40.057097, -82.750953	
USGS Quad Name New Albany	
County	
Township New Albany	
Section and Subsection NA	
Hydrologic Unit Code 050600011503	
Site Visit 5/11/2022	
National Wetland Inventory Map NA	
Ohio Wetland Inventory Map	
Soil Survey	
Delineation report/map	

Name of Wetland:

W-CMS-007

Wetland Size (acres, hectares): 0.118 acres

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





#### Comments, Narrative Discussion, Justification of Category Changes:

The portion within the study area was found to consist of a PFO community. Forested wetland dominated byred maple, American elm, blue beech, reed canary grass, golden ragwort.

Final score: 49

Category:

2

### **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.	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.		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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. 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	
2	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2  YES	Go to Question 2
	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 Database as a high quality wetland?	YES 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 regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES 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 hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES  Wetland is a Category 1 wetland  Go to Question 6	Go to Question 6
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or 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%?	YES 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 most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible	Go to Question 9a
	ulameters greater trian 450m (17.7m) don:	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	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?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible	Go to Question 9c
	The state of the s	Category 3 status	
		Go to Question 10	
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	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These	Go to Question ou	Co to Question to
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category	Go to Question 9e
	native species can also be present:	3 wetland	Oo to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		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	YES	NO
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	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.		
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	YES	NO
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	evaluated for possible Category 3 status	Quantitative Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 5 status	Natility
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum	•	Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		Ţ.
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Rater(s): C.Stallon	е	Date:	5/11/2022
( )	Field Id:		
Vetland Area (size).	W-CMS-007		
class and assign score.			
2ha) (6 pts) (10.1 to <20.2ha) (5 pts) (4 to <10.1ha) (4 pts) 1.2 to <4ha) (3 pts) 0.12 to <1.2ha) (2pts) 6 (0.04 to <0.12ha) (1 pt)	0.118	acres delineated within survey	area
	ounding land use		
	_		
verage 50m (164ft) or more around we is average 25m to <50m (82 to <164ft) ers average 10m to <25m (32ft to <82ft	tland perimeter (7) around wetland perimeter (4) around wetland perimeter (1)	check.	
d growth or older forest, prairie, savann >10 years), shrubland, young second g HIGH. Residential, fenced pasture, par	nah, wildlife area, etc. (7) growth forest. (5) k, conservation tillage, new fallow	field. (3)	
łydrology.			
water (5) ter (3) ittent surface water (3) e water (lake or stream) (5) ater depth. Select one. 7 to 27.6in) (2) (1) as to natural hydrologic regime. Sco	100 year floodplain (1) Between stream/lake an x Part of wetland/upland (i) Part of riparian or upland 3d. Duration inundatio Semi- to permanently in Regularly inundated/sati x Seasonally inundated (2 Seasonally saturated in re one or double check and aver. Check all disturbances ditch tile dike weir stormwater input	ad other human use (1) e.g. forest), complex (1) d corridor (1) n/saturation. Score one or dbl cl undated/saturated (4) urated (3) ) upper 30cm (12in) (1) age. s observed  x point source (nonstormwa filling/grading road bed/RR track	
	-		
covery (1) elopment. Select only one and assig f (4) ration. Score one or double check ar	nd average.	x shrub/sapling removal	emoval
	Vetland Area (size).  class and assign score.  2ha) (6 pts) (10.1 to <20.2ha) (5 pts) (4 to <10.1ha) (4 pts) 1.2 to <1.2ha) (2pts) s (0.04 to <0.12ha) (2pts) s (0.04 to <0.12ha) (1 pt) ha) (0 pts)  Jpland buffers and surroverage 50m (164ft) or more around we reage 50m (164ft) or more around we reage 25m to <50m (82 to <164ft) ers average 25m to <50m (82 to <164ft) ers average 10m to <25m (32ft to <82ft). Buffers average <10m (<32ft) around surrounding land use. Select one or degrowth or older forest, prairie, savanne >10 years), shrubland, young second ge HIGH. Residential, fenced pasture, par dustrial, open pasture, row cropping, methydrology.  Water. Score all that apply. water (5) ter (3) ter (3) ter water (lake or stream) (5) rater depth. Select one.  7 to 27.6in) (2) (1) ns to natural hydrologic regime. Scopparent (12)  covery (1)  Habitat Alteration and Degrated that the poparent (4)  covery (1) elopment. Select only one and assigned that the poparent (4)	class and assign score.  2ha) (6 pts)  (10.1 to <20.2ha) (5 pts)  (10.1 to <20.2ha) (5 pts)  (10.1 to <20.2ha) (3 pts)  (1.2 to <4ha) (3 pts)  (1.2 to <4ha) (3 pts)  (1.2 to <1.2ha) (2 pts)  (1.0	Field Id: W-CMS-007  class and assign score. 2th; 2) (5) (15) (10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (5) (10 - 10 - 20 / 2th; 2) (10 / 2

ORAM-wetland 7.xlsm | test\_Field 5/16/2022

Site: Ang	juin-Brie 1	38kV R0	Rater(s): C.St	allone		Date:	5/11/2022
			•		Field Id:	-	
	3	9			W-CMS-007		
	subtotal ti						
			ecial Wetlands.				
	0 3						
max 10 pts.	subtotal		apply and score as ir	idicated.			
		Bog (10)					
		Fen (10) Old growth forest (1	0)				
		Mature forested wet					
			butary wetland-unrestricted l				
			butary wetland-restricted hyd	drology (5)			
		Relict Wet Praires (	airies (Oak Openings) (10)				
			state/federal threatened or e	ndangered spec	es (10)		
			songbird/water fowl habitat				
r			. See Question 5 Qualitative				
	10 4	9 Metric 6. Pla	nt communities, i	nterspers	ion, microtopography.		
max 20pts.	subtotal	6a. Wetland Ve	getation Communitie	es.	Vegetation Community Cove	er Scale	
		Score all present us	ing 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 ac		
		Aquatic bed		1	Present and either comprises small par		
		Emergent Shrub			vegetation and is of moderate quality, o significant part but is of low quality	or comprises a	
		3 Forest		2	Present and either comprises significant	nt part of wetland's 2	
		Mudflats			vegetation and is of moderate quality or	r comprises a small	
		Open water			part and is of high quality	ar mare of wetlendle 2	
		OtherOther	n view) Interspersion.	3	Present and comprises significant part, vegetation and is of high quality	or more, or wetland's 3	
		Select only one.			g		
		High (5)			Narrative Description of Vegetation C		
		x Moderately high(4)			Low spp diversity and/or predominance	of nonnative or low	
		Moderate (3) Moderately low (2)			disturbance tolerant native species  Native spp are dominant component of	the vegetation, mod	
		Low (1)			although nonnative and/or disturbance		
		None (0)			can also be present, and species divers		
			/asive plants. Refer		moderately high, but generallyw/o prese	ence of rare	
		Table 1 ORAM long or deduct points for			threatened or endangered spp to  A predominance of native species, with	nonnative spp high	
		Extensive >75% co	•		and/or disturbance tolerant native spp a		
		Moderate 25-75% c			absent, and high spp diversity and ofter		
		x Sparse 5-25% cove Nearly absent <5%		s arundinacea	the presence of rare, threatened, or end	dangered spp	
		Absent (1)	cover (0)		Mudflat and Open Water Class Qualit	tv	
		6d. Microtopograp	hy.	0	Absent <0.1ha (0.247 acres)	,	
		Score all present us			Low 0.1 to <1ha (0.247 to 2.47 acres)		
		2 Vegetated hummuc			Moderate 1 to <4ha (2.47 to 9.88 acres	)	
		2 Coarse woody debr Standing dead >250		3	High 4ha (9.88 acres) or more		
		Amphibian breeding			Microtopography Cover Scale		
					Absent		
				1	Present very small amounts or if more	common	
				2	of marginal quality  Present in moderate amounts, but not compared to the comp	of highest	
Category 2				2	quality or in small amounts of highest q		
	49 GRAN	ND TOTAL(max 100 p	ts)	3	Present in moderate or greater amounts	•	
			,	3		<del>-</del>	
					and of highest quality		

ORAM-wetland 7.xlsm | test\_Field 5/16/2022

# **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 MO	If yes, Category 1.
	Question 6. Bogs	YES MO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES MO	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	14	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	14	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	10	
	TOTAL SCORE	49	Category based on score breakpoints 2

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM		
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	<b>©</b>	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 overcategorized 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	<b>(10)</b>	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	0	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?	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	<b>(10)</b>	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	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.		

	Fi	nal Category	
Choose one	Category 1	Category 2	Category 3

**End of Ohio Rapid Assessment Method for Wetlands.** 

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization			
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001		

#### Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

## **Background Information**

Name: Charlotte Stallone

Date: 5/11/2022

Affiliation:

**AECOM** 

Address: 564 White Pond drive, Akron OH 44320

Phone Number: 717-617-7738

e-mail address:

charlotte.stallone@aecom.com

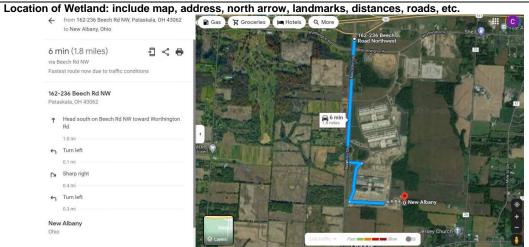
Name of Wetland: W-CMS-008

Vegetation Communit(ies):

PFO

HGM Class(es):

Depressional



Lat/Long or UTM Coordinate 40.058155, -82.745589	
USGS Quad Name New Albany	
County	
Township New Albany	
Section and Subsection NA	
Hydrologic Unit Code 050400060402	
Site Visit 5/11/2022	
National Wetland Inventory Map NA	
Ohio Wetland Inventory Map	
Soil Survey	
Delineation report/map	

Name of Wetland:

W-CMS-008

Wetland Size (acres, hectares): 0.233 acres

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





Comments, Narrative Discussion, Justification of Category Changes:

The portion within the study area was found to consist of a PFO/PUB community. Forested wetland dominated by black willow, foel blue grass, spotted touch-me-not, bulbous tooth-wort, and Canadian honewort.

Final score: 55

Category:

2

#### **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.	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.		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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. 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	
2	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2  YES	Go to Question 2
	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 Database as a high quality wetland?	YES 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 regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES 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 hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES  Wetland is a Category 1 wetland  Go to Question 6	Go to Question 6
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or 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%?	YES 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 most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible	Go to Question 9a
	ulameters greater trian 450m (17.7m) don:	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	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?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible	Go to Question 9c
	The state of the s	Category 3 status	
		Go to Question 10	
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	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These	Go to Question ou	Co to Question to
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category	Go to Question 9e
	native species can also be present:	3 wetland	Oo to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		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	YES	NO
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	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.		
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	YES	NO
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	evaluated for possible Category 3 status	Quantitative Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 5 status	Natility
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

#### Wetland 8

Rater(s): C.Stallone		Date:	5/11/2022
	Field Id:	<u> </u>	
Metric 1. Wetland Area (size).	W-CMS-008		
Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha) (5 pts)  10 to <25 acres (4 to <10.1ha) (4 pts)  3 to <10 acres (1.2 to <4ha) (3 pts)  0.3 to <3 acres (0.12 to <1.2ha) (2pts)  x 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)	0.233	acres delineated within survey area	
<0.1 acres (0.04ha) (0 pts)			
Metric 2. Upland buffers and surro	unding land use.		
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) a	and perimeter (7) round wetland perimeter (4) around wetland perimeter (1)	check.	
X VERY LOW. 2nd growth or older forest, prairie, savannal LOW. Old field (>10 years), shrubland, young second growth MODERATELY HIGH. Residential, fenced pasture, park,	h, wildlife area, etc. (7) bwth forest. (5) conservation tillage, new fallow fie	eld. (3)	
Metric 3. Hydrology.			
None or none apparent (12) Recovered (7) X Recovering (3) Recent or no recovery (1)	100 year floodplain (1)  x Between stream/lake and x Part of wetland/upland (e. x Part of riparian or upland 3d. Duration inundation/ x Semi- to permanently inun Regularly inundated/satur Seasonally inundated (2) Seasonally saturated in up one or double check and average Check all disturbances of ditch tille dike weir stormwater input	other human use (1) .g. forest), complex (1) corridor (1) /saturation. Score one or dbl check. ndated/saturated (4) rated (3) pper 30cm (12in) (1) ge.	
X   None or none apparent (4)   Recovered (3)   Recovering (2)   Recent or no recovery (1)   4b. Habitat development. Select only one and assign   Excellent (7)   Very good (6)   Good (5)   Moderately good (4)   Fair (3)   Poor to fair (2)   Poor (1)	score. average.	shrub/sapling removal	al
	Metric 1. Wetland Area (size).  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 (10.1 to <20.2ha) (3 pts)  3 to <10 acres (1.2 to <4ha) (3 pts)  0.3 to <3 acres (0.04 to <0.12ha) (2pts)  x	Select one size class and assign score.  > 50 acres (20,2 ha) (6 pts) 25 to <50 acres (10,1 to <20,2ha) (5 pts) 10 to <25 acres (4 to <10,1ha) (4 pts) 31 to <10 acres (1,2 to <40,4ha) (3 pts) 0,3 to <3 acres (0,2 to <4,2ha) (2 pts) 0,1 to <3 acres (0,2 to <4,2ha) (2 pts) 0,1 to <3,2 acres (0,0 to <0,12 to <1,2ha) (2 pts) 0,1 to <3,3 acres (0,04 to <0,12 ha) (1 pts) 0,1 to <3,3 acres (0,04 to <1,2ha) (2 pts) 0,1 to <3,3 acres (0,04 to <1,2ha) (2 pts) 0,1 to <3,3 acres (0,04 to <1,2ha) (2 pts) 0,1 to <3,3 acres (0,04 to <1,2ha) (2 pts) 0,1 to <3,3 acres (0,04 to <1,2ha) (2 pts) 0,2 to <1,2ha) (2 pts) 0,3 to <3 acres (0,04 to <1,2ha) (2 pts) 0,4 to <1,2ha) (2 pts) 0,5 to <1,2ha) (2 pts) 0,7 to <1,2ha) (2 p	Metric 1. Wetland Area (size).  Select one size class and assign score.  350 acres (20.2ha) (6 pts)  250 ac 50 acres (10.1 to 20.2ha) (5 pts)  10 to 23 acres (40.2ha) (6 pts)  10 to 43 acres (40.2ha) (6 pts)  30 at 64 acres (0.1 to 4.2ha) (2 pts)  30 at 64 acres (0.1 to 4.2ha) (2 pts)  40 at 1 acres (0.0 tha) (0 pts)  Metric 2. Upland buffers and surrounding land use.  2a. Calculate average buffer width. Select only one and assign score. Do not double check.  WIDE: Buffers average 50n (164th) or more around vestand perimeter (7)  MEDIAL Sulfers average 50n (164th) or more around vestand perimeter (7)  MEDIAL Sulfers average 50n (164th) or more around vestand perimeter (7)  MEDIAL Sulfers average 50n (164th) or more around vestand perimeter (7)  VERY NARROW. Buffers average 10 mio 4.25th come (84 certain) around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (84 certain) around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (84 certain) around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (10.2ha) certain around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (10.2ha) certain around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (10.2ha) certain around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (10.2ha) certain around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (10.2ha) certain around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (10.2ha) certain around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (10.2ha) certain around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (10.2ha) certain around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 4.25th come (10.2ha) certain around vestand perimeter (1)  VERY NARROW. Buffers average 10 mio 1

ORAM-wetland 8.xlsm | test\_Field 5/17/2022

#### Wetland 8

Site:	Brie Substation	Rater(s): C.Stallone			Date:	5/11/2022
				Field Id:		
	38	1		W-CMS-008		
	subtotal this					
	0 38	Metric 5. Special Wetlands.				
max 10 pts.	. subtotal	Check all that apply and score as indicated				
		Bog (10)				
		Fen (10)				
		Old growth forest (10)				
		Mature forested wetland (5)  Lake Erie coastal/tributary wetland-unrestricted hydrology (1)	10)			
		Lake Erie coastal/tributary wetland-restricted hydrology (5)	. 0 ,			
		Lake Plain Sand Prairies (Oak Openings) (10)				
		Relict Wet Praires (10)				
		Known occurrence state/federal threatened or endangered Significant migratory songbird/water fowl habitat or usage (1		es (10)		
		Category 1 Wetland. See Question 5 Qualitative Rating (-10				
	17 55	<del></del> -	,	ion, microtopography.		
		<u>-</u>			or Coalo	
max 20pts.	subtotal	6a. Wetland Vegetation Communities.	0	Vegetation Community Cove Absent or comprises <0.1ha (0.2471 ad		
		Score all present using 0 to 3 scale.  2 Aquatic bed		Present and either comprises small par		
		Emergent	•	vegetation and is of moderate quality, o		
		Shrub		significant part but is of low quality		
		3 Forest	2	Present and either comprises significan		
		Mudflats Open water		vegetation and is of moderate quality or part and is of high quality	comprises a small	
		Other	3	Present and comprises significant part,	or more, of wetland's 3	
		6b. horizontal (plan view) Interspersion.	Ŭ	vegetation and is of high quality	or more, or weathing o	
		Select only one.				
		High (5)		Narrative Description of Vegetation C		
		x Moderately high(4) Moderate (3)		Low spp diversity and/or predominance disturbance tolerant native species	of nonnative of low	
		Moderately low (2)		Native spp are dominant component of	the vegetation, mod	
		Low (1)		although nonnative and/or disturbance	tolerant native spp	
		None (0)		can also be present, and species divers	•	
		6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add		moderately high, but generallyw/o presenthreatened or endangered spp to	ence of rare	
		or deduct points for coverage		A predominance of native species, with	nonnative spp high	
		Extensive >75% cover (-5)		and/or disturbance tolerant native spp a		
		Moderate 25-75% cover (-3)		absent, and high spp diversity and ofter		
		Sparse 5-25% cover (-1)		the presence of rare, threatened, or end	langered spp	
		Nearly absent <5% cover (0)  x Absent (1)		Mudflat and Open Water Class Qualit	v	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	,	
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acres)		
		2 Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88 acres	)	
		2 Coarse woody debris >15cm (6in) 1 Standing dead >25cm (10in) dbh	3	High 4ha (9.88 acres) or more		
		2 Amphibian breeding pools		Microtopography Cover Scale		
			0	Absent		
			1	Present very small amounts or if more of	common	
			_	of marginal quality	f highoot	
Categor	v 2		2	Present in moderate amounts, but not of quality or in small amounts of highest quality	•	
Juliagon		TOTAL(max 100 pts)	- 2			
	33 GRANL	TOTAL(IIIax 100 pts)	3	Present in moderate or greater amounts	•	
				and of highest quality		

ORAM-wetland 8.xlsm | test\_Field 5/17/2022

# **ORAM Summary Worksheet**

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (10)	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 MO	If yes, Category 1.
	Question 6. Bogs	YES MO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES MO	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	
ŭ	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	13	
	Metric 4. Habitat	19	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	17	
	TOTAL SCORE	55	Category based on score breakpoints 2

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	<b>©</b>	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 overcategorized 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	<b>(10)</b>	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	0	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?	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	<b>(10)</b>	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	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.

	Fi	nal Category	
Choose one	Category 1	Category 2	Category 3

**End of Ohio Rapid Assessment Method for Wetlands.** 

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization			
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001		

#### Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: <a href="http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx">http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx</a>

## **Background Information**

Name: Charlotte Stallone

Date: 5/11/2022

Affiliation:

AECOM

Address: 564 White Pond drive, Akron OH 44320

Phone Number: 717-617-7738

e-mail address:

charlotte.stallone@aecom.com

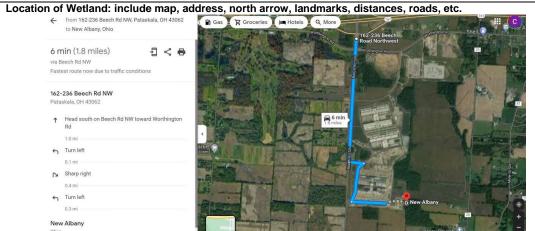
Name of Wetland: W-CMS-011

Vegetation Communit(ies):

PEM

HGM Class(es):

Depressional



Lat/Long or UTM Coordinate 40.057436, -82.749951				
USGS Quad Name New Albany				
County				
Township New Albany				
Section and Subsection NA				
Hydrologic Unit Code 050600011503				
Site Visit 5/11/2022				
National Wetland Inventory Map NA				
Ohio Wetland Inventory Map				
Soil Survey				
Delineation report/map				

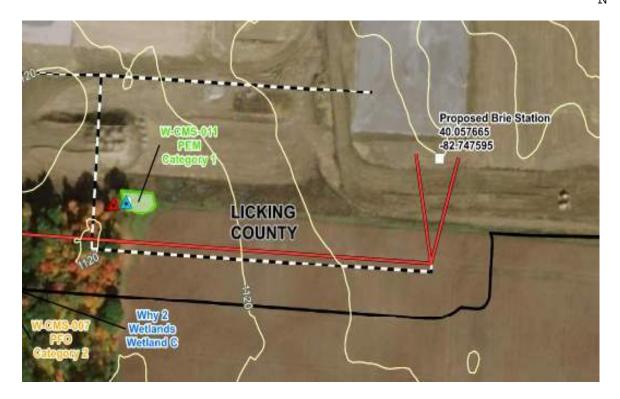
Name of Wetland:

W-CMS-011

Wetland Size (acres, hectares): 0.052 acres

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





#### Comments, Narrative Discussion, Justification of Category Changes:

The portion within the study area was found to consist of a PEM community. Active agricultural field. Soils have been compacted. Compaction prevents water from percolating properly through the soil and affects hydrology, natural vegetation has been removed and seeded with pasture grass mix.

Final score: 13 Category:

#### **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.	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.		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), <a href="http://www.dnr.state.oh.us/dnap">http://www.dnr.state.oh.us/dnap</a>. 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	
2	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2  YES	Go to Question 2
	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 Database as a high quality wetland?	YES 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 regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES 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 hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES  Wetland is a Category 1 wetland  Go to Question 6	Go to Question 6
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or 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%?	YES 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 most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	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	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible	Go to Question 9a
	ulameters greater trian 450m (17.7m) don:	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	NO
	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?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to	YES	NO
	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?	Wetland should be evaluated for possible	Go to Question 9c
	The state of the s	Category 3 status	
		Go to Question 10	
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	Go to Question 9d	Go to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These	Go to Question ou	Co to Question to
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its	YES	NO
	vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category	Go to Question 9e
	native species can also be present:	3 wetland	Oo to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		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	YES	NO
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	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.		
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	YES	NO
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	evaluated for possible Category 3 status	Quantitative Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 5 status	Natility
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

#### Wetland 11

Site: Anguin-l	Brie 138kV R0/B	Brie Substati	on Rater(s): C.Stallone		Date:	5/11/2022
				Field Id:	•	
	0	0 Me	etric 1. Wetland Area (size).	W-CMS-011		
max 6 pts	subtotal	Sele	ect one size class and assign score.			
		>50	acres (>20.2ha) (6 pts)	0.053	acres delineated within survey area	
			o <50 acres (10.1 to <20.2ha) (5 pts)		<del></del>	
			o <25 acres (4 to <10.1ha) (4 pts) <10 acres (1.2 to <4ha) (3 pts)			
			to <3 acres (0.12 to <1.2ha) (2pts)			
		0.1	to <0.3 acres (0.04 to <0.12ha) (1 pt)			
		x <0.1	1 acres (0.04ha) (0 pts)			
	1	1 Me	etric 2. Upland buffers and surrou	ınding land use.		
max 14 pts.	subtotal	2a.	Calculate average buffer width. Select only one an	d assign score. Do not double	e check.	
			DE. Buffers average 50m (164ft) or more around wetla			
			DIUM. Buffers average 25m to <50m (82 to <164ft) are	,		
			RROW. Buffers average 10m to <25m (32ft to <82ft) a RY NARROW. Buffers average <10m (<32ft) around w			
		2b.	Intensity of surrounding land use. Select one or do	ouble check and average.		
			RY LOW. 2nd growth or older forest, prairie, savannah			
			Old field (>10 years), shrubland, young second groups		(° 11 (°)	
			DERATELY HIGH. Residential, fenced pasture, park,	•	field. (3)	
		_	iH. Urban, industrial, open pasture, row cropping, mini	rig, construction. (1)		
	6.0 7.	0 Ме	etric 3. Hydrology.			
max 30 pts.	subtotal		Sources of Water. Score all that apply.	3b. Connectivity. Scor	re all that apply.	
			h pH groundwater (5) er groundwater (3)	100 year floodplain (1) Between stream/lake ar	nd other human use (1)	
			cipitation (1)		(e.g. forest), complex (1)	
		Sea	sonal/Intermittent surface water (3)	Part of riparian or uplan	nd corridor (1)	
			ennial surface water (lake or stream) (5)		on/saturation. Score one or dbl check.	
			Maximum water depth. Select one. 7 (27.6in) (3)	Semi- to permanently in x Regularly inundated/sat		
			to 0.7m (15.7 to 27.6in) (2)	Seasonally inundated (2		
		x <0.4	4m (<15.7in) (1)	Seasonally saturated in	upper 30cm (12in) (1)	
			Modifications to natural hydrologic regime. Score			
			ne or none apparent (12) covered (7)	Check all disturbance	x point source (nonstormwater)	
			covering (3)	tile	filling/grading	
		x Rec	cent or no recovery (1)	dike	road bed/RR track	
				weir	dredging	
		<del>.</del>		stormwater input	Other:	
	3 1	_	etric 4. Habitat Alteration and Dev	•		
max 20 pts.	subtotal		Substrate disturbance. Score one or double check ne or none apparent (4)	and average.		
			covered (3)			
		Rec	covering (2)			
			cent or no recovery (1)			
			Habitat development. Select only one and assign sellent (7)	score.		
			y good (6)			
			od (5)			
			derately good (4)			
			· (3) or to fair (2)			
			or (1)			
		4c.	Habitat alteration. Score one or double check and			
			ne or none apparent (9)	Check all disturbances		
			covered (6) covering (3)	mowing grazing	shrub/sapling removal herbaceous/aquatic bed removal	al
			cent or no recovery (1)	clearcutting	sedimentation	••
				selective cutting	dredging	
				woody debris removal toxic pollutants	x farming nutrient enrichment	
	4	0		toxic polititarits	Inditions childrings	
		_	AM v. E O Field Form Oventitativa Dating			
	subtotal th	nis page OR	AM v. 5.0 Field Form Quantitative Rating			

ORAM-wetland 11.xlsm | test\_Field 5/17/2022

Site: Ang	guin-Brie 1	38kV R0/Brie Substat Rater(s): C.Stallo	ne		Date:	5/11/2022
			Fi	eld ld:		
	1	0	W	-CMS-011		
	subtotal th					
	0 1					
	_	<u> </u>	at a d			
max 10 pts.	subtotal	Check all that apply and score as indicated	ated.			
		Bog (10) Fen (10)				
		Old growth forest (10)				
		Mature forested wetland (5)				
		Lake Erie coastal/tributary wetland-unrestricted hydro				
		Lake Erie coastal/tributary wetland-restricted hydrolog Lake Plain Sand Prairies (Oak Openings) (10)	Jy (5)			
		Relict Wet Praires (10)				
		Known occurrence state/federal threatened or endang		10)		
		Significant migratory songbird/water fowl habitat or us				
	21 4	Category 1 Wetland. See Question 5 Qualitative Ratio				
	3 1	Metric 6. Plant communities, inte	•			
max 20pts.	subtotal	6a. Wetland Vegetation Communities.		egetation Community Cove		
		Score all present using 0 to 3 scale.		sent or comprises <0.1ha (0.2471 ac		
		Aquatic bed 1 Emergent		esent and either comprises small par getation and is of moderate quality, o		
		Shrub		nificant part but is of low quality	r comprisco a	
		Forest		esent and either comprises significan		
		Mudflats	-	getation and is of moderate quality or	comprises a small	
		Open water Other		t and is of high quality esent and comprises significant part,	or more, of wotland's 2	
		6b. horizontal (plan view) Interspersion.		getation and is of high quality	of more, or welland's 3	
		Select only one.				
		High (5)		rrative Description of Vegetation C		
		Moderately high(4) Moderate (3)		w spp diversity and/or predominance	of nonnative or low	
		Moderately low (2)		turbance tolerant native species tive spp are dominant component of	the vegetation, mod	
		x Low (1)		nough nonnative and/or disturbance		
		None (0)		n also be present, and species divers		
		6c. Coverage of invasive plants. Refer		derately high, but generallyw/o prese	ence of rare	
		Table 1 ORAM long form for list. Add or deduct points for coverage		eatened or endangered spp to oredominance of native species, with	nonnative son high	
		Extensive >75% cover (-5)		d/or disturbance tolerant native spe		
		Moderate 25-75% cover (-3)		sent, and high spp diversity and ofter	•	
		Sparse 5-25% cover (-1)	the	presence of rare, threatened, or end	langered spp	
		Nearly absent <5% cover (0)		dflat and Open Water Class Qualit		
		x Absent (1) 6d. Microtopography.		sent <0.1ha (0.247 acres)	у	
		Score all present using 0 to 3 scale.		w 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks/tussucks		derate 1 to <4ha (2.47 to 9.88 acres)		
		Coarse woody debris >15cm (6in)	3 Hig	h 4ha (9.88 acres) or more		
		Standing dead >25cm (10in) dbh  Amphibian breeding pools	Mic	crotopography Cover Scale		
		, anythisian probability pools	0 0 Abs			
			1 Pre	esent very small amounts or if more of	common	
				narginal quality	f hish sat	
Category 1				esent in moderate amounts, but not c ality or in small amounts of highest qu		
Jalegoly I	12 CD A1	ID TOTAL(max 100 pts)	<del></del>	· · · · · · · · · · · · · · · · · · ·		
	13 GKAN	ID TOTAL(IIIAX TOU PIS)	3 Pre	esent in moderate or greater amounts	S	
			and	d of highest quality		

ORAM-wetland 11.xlsm | test\_Field 5/17/2022

# **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 MO	If yes, Category 1.
	Question 6. Bogs	YES MO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES MO	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 MO	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	
	Metric 3. Hydrology	6	
	Metric 4. Habitat	3	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE	13	Category based on score breakpoints 1

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	<b>©</b>	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 overcategorized 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	<b>©</b>	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?	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	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, loca or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category			
Choose one	( Category 1	Category 2	Category 3

**End of Ohio Rapid Assessment Method for Wetlands.** 



Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-001

Date:

March 10, 2022

**Description:** 

PEM wetland

Category 1

Facing North



#### W-CMS-001

Date:

March 10, 2022

**Description:** 

PEM wetland

Category 1

Facing East





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-001

Date:

March 10, 2022

**Description:** 

PEM wetland

Category 1

Facing South



#### W-CMS-001

Date:

March 10, 2022

**Description:** 

PEM wetland

Category 1

Facing West





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-001

Date:

March 10, 2022

**Description:** 

PEM wetland

Category 1

Facing Soil



#### W-CMS-002

Date:

March 10, 2022

**Description:** 

PEM wetland

Category 1

Facing North





Client Name:

Site Location:

**Project No.** 60683729

AEP

Anguin-Brie 138kV Transmission Line Project

#### W-CMS-002

Date:

March 10, 2022

**Description:** 

PEM wetland

Category 1

Facing East



#### W-CMS-002

Date:

March 10, 2022

**Description:** 

PEM wetland

Category 1

Facing South





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-002

Date:

March 10, 2022

**Description:** 

PEM wetland

Category 1

Facing West



#### W-CMS-002

Date:

March 10, 2022

**Description:** 

PEM wetland

Category 1

Facing Soils





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-003

Date:

May 10, 2022

**Description:** 

PEM wetland

Category 1

Facing North



#### W-CMS-003

Date:

May 10, 2022

**Description:** 

PEM wetland

Category 1

Facing East





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-003

Date:

May 10, 2022

**Description:** 

PEM wetland

Category 1

Facing South



## W-CMS-003

Date:

May 10, 2022

**Description:** 

PEM wetland

Category 1

Facing West





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-003

Date:

May 10, 2022

**Description:** 

PEM wetland

Category 1

Facing Soils



## W-CMS-004

Date:

May 10, 2022

**Description:** 

PEM wetland

Category 1

Facing North





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-004

Date:

May 10, 2022

**Description:** 

PEM wetland

Category 1

Facing East



## W-CMS-004

Date:

May 10, 2022

**Description:** 

PEM wetland

Category 1

Facing South





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-004

Date:

May 10, 2022

**Description:** 

PEM wetland

Category 1

Facing West



## W-CMS-004

Date:

May 10, 2022

**Description:** 

PEM wetland

Category 1

Facing Soils





Client Name:

Site Location:

Project No. 60683729

AEP

Anguin-Brie 138kV Transmission Line Project

W-CMS-005

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 2

Facing North



#### W-CMS-005

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 2

Facing East





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-005

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 2

Facing South



#### W-CMS-005

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 2

Facing West





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-005

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 2

Facing Soil



#### W-CMS-005

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing North





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-005

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing East



#### W-CMS-005

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing South





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-005

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing West



#### W-CMS-005

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing Soils





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-006

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing North



#### W-CMS-006

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing East





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-006

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing South



#### W-CMS-006

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing West





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-006

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing Soils



#### W-CMS-007

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing North





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-007

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing East



#### W-CMS-007

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing South





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-007

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing West



#### W-CMS-007

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing Soils





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-008

Date:

May 11, 2022

**Description:** 

PFO/PUB wetland

Category 2

Facing North



# W-CMS-008

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing East





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-008

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing South



# W-CMS-008

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing West





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-008

Date:

May 11, 2022

**Description:** 

PFO wetland

Category 2

Facing Soils



#### W-CMS-009

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing North





Client Name:

Site Location:

**Project No.** 60683729

AEP

Anguin-Brie 138kV Transmission Line Project

W-CMS-009

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing East



# W-CMS-009

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing South





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-009

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing West



# W-CMS-009

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing Soils





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-010

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing North



#### W-CMS-010

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing East





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-010

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing South



#### W-CMS-010

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing West





Client Name:

Site Location:

**Project No.** 60683729

AEP

Anguin-Brie 138kV Transmission Line Project

#### W-CMS-010

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing Soils



#### W-CMS-011

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing North





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-011

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing East



#### W-CMS-011

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing South





Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### W-CMS-011

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing West



#### W-CMS-011

Date:

May 11, 2022

**Description:** 

PEM wetland

Category 1

Facing Soils



# APPENDIX B OEPA STREAM DATA FORMS / DELINEATED FEATURES PHOTOGRAPHS (STREAMS)



# ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):



SITE NAME/LOCATION				
S-CMS-001 SITE NUMBER	RIVER BASIN	DRAII	NAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft)	LAT LONG	RIVER CODE	RIVER MILE	
DATE SCORER	COMMENTS			
NOTE: Complete All Items On This Form	- Refer to "Field Evaluation M	anual for Ohio's PHWH	Streams" for Instructions	
STREAM CHANNEL NONE / NAT MODIFICATIONS:	URAL CHANNEL	RECOVERING R	ECENT OR NO RECOVERY	
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] 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	nt substrate types found (Max of 8).    RCENT	Final metric score is sum of b  CK/WOODY DEBRIS [3 pts]  RITUS [3 pts]  HARDPAN [0 pt]  pts]  AL [3 pts]  centage	PERCENT  PERCENT  Substrate Max = 40  A + B	
SCORE OF TWO MOST PREDOMINATE SUBST	TRATE TYPES: TOTA	L NUMBER OF SUBSTRAT	E TYPES:	
2. Maximum Pool Depth (Measure the mae evaluation. Avoid plunge pools from road > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	culverts or storm water pipes) (Ch $\square$ > 5 cm - $\square$ < 5 cm [§	neck ONLY one box): 10 cm [15 pts]	Max = 30	
COMMENTS				
COMMENTS	A\	ERAGE BANKFULL WIDTH	(Feet):	
RIPARIAN ZONE AND FLOODPI  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Moderate 5-10m  Narrow <5m  None  COMMENTS	This information must also  AIN QUALITY ☆NOTE: River I  FLOODPLAIN QUALITY  L R (Most Predominant per I  Mature Forest, Wetland Immature Forest, Shrub Field  Residential, Park, New I  Fenced Pasture	Left (L) and Right (R) as look  Bank)  Cr  Or Old  Or  Field  D  Or	ing downstream ☆ onservation Tillage ban or Industrial oen Pasture, Row Crop ning or Construction	
FLOW REGIME (At Time of Eval.  Stream Flowing Subsurface flow with isolated pool COMMENTS  SINUOSITY (Number of bends per		_		
O.5  STREAM GRADIENT ESTIMATE  Flat (0.5 ft/100 ft)  Flat to Moderate	1.5		>3 Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also	be Completed):
QHEI PERFORMED? - Tyes No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
☐ WWH Name:	Distance from Evaluated Stream
☐ CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE $\underline{EN}$	TIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Towns	nip / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):	
Were samples collected for water chemistry? (Y/N): (Note lab	sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (μmhos/cm)
Is the sampling reach representative of the stream $(Y/N)$ If not,	please explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
( ,	collections optional. NOTE: all voucher samples must be labeled with the site sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Of Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquat	
Comments Regarding Biology:	

#### DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

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



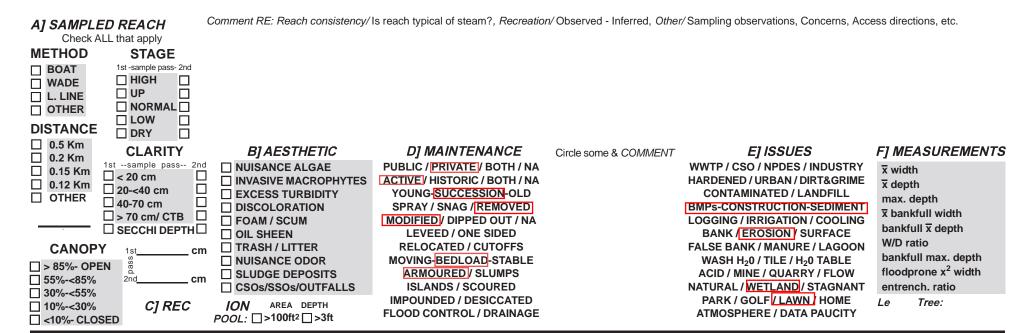


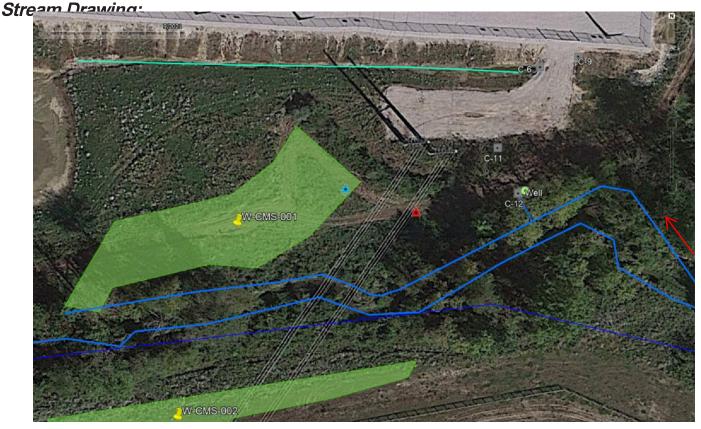


# **Qualitative Habitat Evaluation Index and Use Assessment Field Sheet**

Poor	
QHEI Score:	

Stream & Location:	_RM:	Date:	
Scorers Full Name & Affiliation:  River Code: - STORET # Lat./ Long.:			Office verified
(NAD 83 - decimal °)			location
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present  BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE  BLDR /SLABS [10]	SILT	& average) QUAL HEAVY [- MODERA NORMAL FREE [1] MODERA MODERA NORMAL	2]  NTE [-1]  Substrate  [0]  VE [-2]  NTE [-1]  Maximum  20
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common quality; 2-Moderate amounts, but not of highest quality or in small amounts quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional UNDERCUT BANKS [1] POOLS > 70cm [2] OXBOWS, BACKWATE OVERHANGING VEGETATION [1] ROOTWADS [1] AQUATIC MACROPHY SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] LOGS OR WOODY DEIROOTMATS [1]	r, large I pools. ERS [1] TES [1]	Check ONE (C	or 2 & average) >75% [11] 25-75% [7]
3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)			
SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY  HIGH [4]			Channel Maximum 20
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (C	r 2 ner han	nk & average)	
River right looking downstream RIPARIAN WIDTH RROSION WIDE > 50m [4] SHRUB OR OLD FIELD [2] MODERATE [2] NARROW 5-10m [2] HEAVY / SEVERE [1] NONE [0]  RIPARIAN WIDTH RPOREST, SWAMP [3] SHRUB OR OLD FIELD [2] RESIDENTIAL, PARK, NEW FIELD PENCED PASTURE [1] OPEN PASTURE, ROWCROP [0]	TY   R	CONSERVATIO URBAN OR INI MINING / CONS te predominant la 100m riparian.	DUSTRIAL [0] STRUCTION [0] and use(s) Riparian
Comments		,	Maximum 10
5] POOL / GLIDE AND RIFFLE / RUN QUALITY  MAXIMUM DEPTH  Check ONE (ONLY!)  > 1m [6]  O.7-<1m [4]  O.4-<0.7m [2]  O.2-<0.4m [1] <p>O.2-&lt;0.4m [1]</p> O.2-m [0] CHANNEL WIDTH  CHANNEL WIDTH  CHOCK ONE (Or 2 & average)  Check ALL that apply  TORRENTIAL [-1]  VERY FAST [1]  INTERSTITE  MODERATE [1]  Indicate for reach - pools and rights  Indicate for reach - pools and rights  Indicate for reach - pools and rights  TORRENTIAL [-1]  NODERATE [1]  Indicate for reach - pools and rights  Indicate for reach - pools and rights  CHRENT VELOCITY  Check ALL that apply  TORRENTIAL [-1]  SLOW [1]  VERY FAST [1]  Indicate for reach - pools and rights  Indicate for reach - pools and	TIAL [-1] TENT [-2]	Secondar (circle one and co	Contact y Contact pumment on back)  Pool / Current
Comments			Maximum 12
□ BEST AREAS > 10cm [2] □ MAXIMUM > 50cm [2] □ STABLE (e.g., Cobble, Boulder) [2] □ BEST AREAS 5-10cm [1] □ MAXIMUM < 50cm [1] □ MOD. STABLE (e.g., Large Gravel) [1] □ BEST AREAS < 5cm □ UNSTABLE (e.g., Fine Gravel, Sand) [0] Comments	FLE / RU	IN EMBEDDINONE [2]  LOW [1]  MODERATE [0]  EXTENSIVE [-1]	Riffle /
6] GRADIENT (ft/mi) VERY LOW - LOW [2-4] %POOL:  DRAINAGE AREA MODERATE [6-10] %RUN:	%GLID %RIFFL	$\supset$	Gradient Maximum





**FLOW** 



# ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

		П
		П
		П
		П
_		ч

SITE NAME/LOCATION			
_S-CMS-003SITE NUMBER	RIVER BASIN	DRAI	NAGE AREA (mi²)
LENGTH OF STREAM REACH (ft) I	_AT LONG	RIVER CODE	RIVER MILE
DATE SCORER	COMMENTS		
NOTE: Complete All Items On This Form	- Refer to "Field Evaluation M	anual for Ohio's PHWH	Streams" for Instructions
STREAM CHANNEL NONE / NATUMODIFICATIONS:	JRAL CHANNEL	D RECOVERING R	ECENT OR NO RECOVERY
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] 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	nt substrate types found (Max of 8).  RCENT TYPE SILT [3 pt LEAF PAC FINE DET CLAY or F MUCK [0 ARTIFICIA  (A) Substrate Pe Check	Final metric score is sum of I  CK/WOODY DEBRIS [3 pts]  RITUS [3 pts]  HARDPAN [0 pt] pts]  AL [3 pts]  rcentage	PERCENT  PERCENT  Substrate Max = 40  A + B
SCORE OF TWO MOST PREDOMINATE SUBST	RATE TYPES: TOTA	AL NUMBER OF SUBSTRAT	TE TYPES:
2. Maximum Pool Depth (Measure the maevaluation. Avoid plunge pools from road > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	culverts or storm water pipes) (CI > 5 cm - < 5 cm [	heck ONLY one box): 10 cm [15 pts]	Max = 30
COMMENTS	Ma	AXIMUM POOL DEPTH	(Inches):
3. BANK FULL WIDTH (Measured as the a > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	□ > 1.0 m	(Check ONLY one box - 1.5 m (> 3' 3" - 4' 8") [15 pts] (<=3' 3") [5 pts]	
COMMENTS	A\	VERAGE BANKFULL WIDTH	f (Feet):
			(* 33.4)
RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Moderate 5-10m  Narrow <5m  None	This information must also AIN QUALITY ☆NOTE: River  FLOODPLAIN QUALITY  L R (Most Predominant per  Mature Forest, Wetland Immature Forest, Shrub Field  Residential, Park, New  Fenced Pasture	Left (L) and Right (R) as look  Bank)  O or Old  Field  O  Right (R) as look  U  O  O  O  O  O  O  O  O  O  O  O  O	ing downstream ☆  onservation Tillage  rban or Industrial  pen Pasture, Row Crop  ining or Construction
	r 61 m (200 ft) of channel) (Check	_	meral)
STREAM GRADIENT ESTIMATE  Flat (0.5 ft/100 ft)  Flat to Moderate	1.0 1.5 □ 2.6 □ Moderate (2 ft/100 ft)		3.0 >3

ADDITIONAL STREAM INFORMATION (This Information Mu:	st Also be Completed):
QHEI PERFORMED? - Tyes No QHEI Score	e (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
_	Distance from Evaluated Stream
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:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County:	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation	n: Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):	
Were samples collected for water chemistry? (Y/N): (N	Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/	l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N)	If not, please explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
,	Voucher collections optional. NOTE: all voucher samples must be labeled with the site eld data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salaman Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N)	ders Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	

# DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

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







# ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):



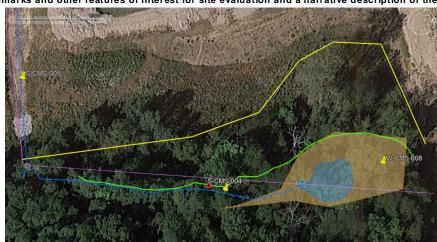
SITE NAME/LOCATION			
S-CMS-0.04SITE NUMBER	RIVER BASIN	DRA	INAGE AREA (mi²)
LENGTH OF STREAM REACH (ft)	LAT LONG	RIVER CODE	RIVER MILE
DATE SCORER	COMMENTS		
NOTE: Complete All Items On This Form	- Refer to "Field Evaluation N	lanual for Ohio's PHWH	Streams" for Instructions
STREAM CHANNEL NONE / NAT MODIFICATIONS:	URAL CHANNEL	D □ RECOVERING □ F	RECENT OR NO RECOVERY
BLDR SLABS [16 pts]  BOULDER (>256 mm) [16 pts]  BEDROCK [16 pt]  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	Int substrate types found (Max of 8).  INTERIOR TYPE  SILT [3 p  LEAF PA  FINE DE  CLAY or  MUCK [0  ARTIFICI  (A)  Substrate Pe  Check	Final metric score is sum of  t] CK/WOODY DEBRIS [3 pts] FRITUS [3 pts] HARDPAN [0 pt] pts] AL [3 pts]	boxes A & B.  PERCENT  Below Boxes A & B.  PERCENT  Boxes A & B.  Metric Points  Substrate Max = 40  A + B
SCORE OF TWO MOST PREDOMINATE SUBS	TRATE TYPES: TOT	AL NUMBER OF SUBSTRA	TE TYPES:
2. Maximum Pool Depth (Measure the management of the evaluation. Avoid plunge pools from road in a solution of the evaluation. Avoid plunge pools from road in a solution of the evaluation. Avoid plunge pools from road in a solution of the evaluation of the evaluation. Avoid plunge pools from road in a solution of the evaluation of the	culverts or storm water pipes) (C > 5 cm - < 5 cm	heck ONLY one box): 10 cm [15 pts]	Max = 30
COMMENTS			(Inches):
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	> 1.0 m	(Check ONLY one bo) - 1.5 m (> 3' 3" - 4' 8") [15 pts (<=3' 3") [5 pts]	
COMMENTS	A	VERAGE BANKFULL WIDT	H (Feet):
<u>RIPARIAN WIDTH</u>	This information <u>must</u> als LAIN QUALITY ☆NOTE: River FLOODPLAIN QUALITY	Left (L) and Right (R) as lool	king downstream☆
L R (Per Bank) ☐ ☐ Wide >10m ☐ ☐ Moderate 5-10m	L R (Most Predominant per Mature Forest, Wetland Immature Forest, Shrull Field		onservation Tillage rban or Industrial
□ □ Narrow <5m	Residential, Park, New	Field	pen Pasture, Row Crop
□ □ None COMMENTS	☐ ☐ Fenced Pasture	□ □ N	lining or Construction
FLOW REGIME (At Time of Eval Stream Flowing Subsurface flow with isolated pool COMMENTS	íì	Moist Channel, isolated pools Dry channel, no water (Ephe	
SINUOSITY (Number of bends por None 0.5	er 61 m (200 ft) of channel) (Check 1.0	0 📮	3.0 >3
STREAM GRADIENT ESTIMATE  Flat (0.5 ft/100 ft)  Flat to Moderate	☐ Moderate (2 ft/100 ft)	Moderate to Severe	☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information M	flust Also be Completed):
QHEI PERFORMED? - TYes No QHEI Sc	ore (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
_	Distance from Evaluated Stream
_	Distance from Evaluated Stream
☐ EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDIN	G THE <u>entire</u> watershed area. Clearly mark the site location
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County:	Township / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipita	tion: Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):	
Were samples collected for water chemistry? (Y/N):	(Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (m	ng/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N)	If not, please explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
, ,	s. Voucher collections optional. NOTE: all voucher samples must be labeled with the site a field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salam Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N)	anders Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	

#### DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

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







**Stream and Drainage Features Photographs** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683658

#### S-CMS-001

Date:

March 10, 2022

**Description:** 

Intermittent

UNT to Blacklick Creek

Class 1 PHW

Facing Upstream



#### S-CMS-001

Date:

March 10, 2022 **Description:** 

Intermittent

UNT to Blacklick Creek

Class 1 PHW

Facing Downstream





**Stream and Drainage Features Photographs** 

Client Name:

**Site Location:** 

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683658

#### S-CMS-001

Date:

March 10, 2022

**Description:** 

Intermittent

UNT to Blacklick Creek

Class 1 PHW

Substrate



#### **S-CMS-002**

Date:

March 10, 2022

**Description:** 

Perennial

UNT to Blacklick Creek

Poor

Facing Upstream





**Stream and Drainage Features Photographs** 

Client Name:

**Site Location:** 

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683658

#### S-CMS-002

Date:

March 10, 2022

**Description:** 

Perennial

UNT to Blacklick

Creek

Poor

Facing Downstream



#### S-CMS-002

Date:

March 10, 2022

**Description:** 

Perennial

UNT to Blacklick

Creek

Poor

Substrate





**Stream and Drainage Features Photographs** 

Client Name:

**Site Location:** 

Project No.

**AEP** 

Anguin-Brie 138kV Transmission Line Project

60683658

#### S-CMS-003

Date:

May 11, 2022

**Description:** 

Perennial

UNT to Blacklick Creek

Modified Class 1 PHW

Facing Upstream



#### S-CMS-003

Date:

May 11, 2022 **Description:** 

Perennial

UNT to Blacklick Creek

Modified Class 1 PHW

Facing Downstream





**Stream and Drainage Features Photographs** 

Client Name:

**Site Location:** 

Project No.

**AEP** 

Anguin-Brie 138kV Transmission Line Project

60683658

#### S-CMS-003

Date:

May 11, 2022

**Description:** 

Perennial

UNT to Blacklick Creek

Modified Class 1 PHW

Substrate



#### S-CMS-004

Date:

May 11, 2022

Description:

Intermittent

UNT to South Fork Licking River

Class 2 PHW

Facing Upstream





**Stream and Drainage Features Photographs** 

Client Name:

**Site Location:** 

Project No.

**AEP** 

Anguin-Brie 138kV Transmission Line Project

60683658

#### S-CMS-004

Date:

May 11, 2022

**Description:** 

Intermittent

UNT to South Fork Licking River

Class 2 PHW

Facing Downstream



#### S-CMS-004

Date:

May 11, 2022 **Description:** 

Intermittent

UNT to South Fork Licking River

Class 2 PHW

Substrate





**Stream and Drainage Features Photographs** 

Client Name:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

**Site Location:** 

60683658

#### UDF-CMS-001

Date:

May 10, 2022

**Description:** 

Upland Drainage Feature

Facing Upstream



#### UDF-CMS-001

Date:

May 10, 2022

**Description:** 

Upland Drainage Feature

Facing Downstream





**Stream and Drainage Features Photographs** 

Client Name:

**Site Location:** 

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683658

#### UDF-CMS-001

Date:

May 10, 2022

**Description:** 

Upland Drainage Feature

Facing Substrate



#### UDF-CMS-003

Date:

May 11, 2022

**Description:** 

Upland Drainage Feature

Facing Upstream





**Stream and Drainage Features Photographs** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683658

#### UDF-CMS-003

Date:

May 11, 2022

**Description:** 

Upland Drainage Feature

Facing Downstream



#### UDF-CMS-003

Date:

May 11, 2022

**Description:** 

Upland Drainage Feature

Facing Substrate



## APPENDIX C PONDS AND HABITAT PHOTOGRAPHIC RECORD



**Pond Photograph Record** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### P-CMS-001

Date:

May 10, 2022

**Description:** 

Manmade Pond

Facing South



#### P-CMS-002

Date:

May 10, 2022

**Description:** 

Manmade Pond

Facing East





**Pond Photograph Record** 

Client Name:

Site Location:

Project No.

60683729

AEP

Anguin-Brie 138kV Transmission Line Project

P-CMS-003

Date:

May 10, 2022

**Description:** 

Manmade Pond

Facing South



PH-1

Date:

May 11, 2022

**Description:** 

Developed / Open Space

Facing North





**Pond Photograph Record** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### Habitat

Date:

May 10, 2022

#### **Description:**

Developed Open Space

Facing West



#### PH-2

Date:

May 10, 2022

### **Description:**

Old Field

Facing South





**Pond Photograph Record** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

**PH-3** 

Date:

May 11, 2022

**Description:** 

Old Field

Facing South



**PH-4** 

Date:

May 11, 2022 **Description:** 

Forested

Facing North





**Pond Photograph Record** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### **PH-5**

Date:

May 11, 2022

#### **Description:**

Developed / Open Space and Forested Edge

Facing East



#### **PH-6**

Date:

May 11, 2021 **Description:** 

Developed / Open Space

Maintained Field

Facing South





**Pond Photograph Record** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

**PH-7** 

Date:

May 11, 2021

**Description:** 

Urban/Industrial Use

Facing North



**PH-8** 

Date:

May 11, 2021

**Description:** 

Forested

Facing North





**Pond Photograph Record** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

**PH-9** 

Date:

May 11, 2021

**Description:** 

Forested

Developed / Open Space

South



PH-10

Date:

May 11, 2021

**Description:** 

Forested

Facing East





**Pond Photograph Record** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

#### PH-11

Date:

May 11, 2021

**Description:** 

Urban/Industrial Use

Facing West



#### PH-12

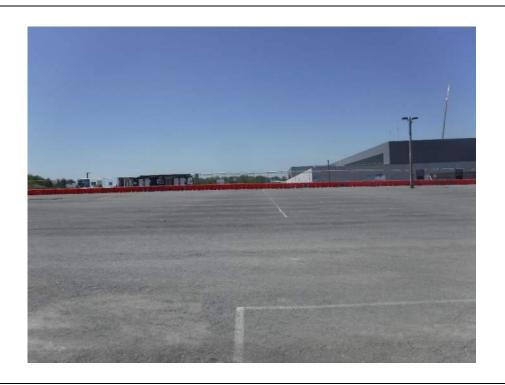
Date:

May 11, 2021

**Description:** 

Urban/Industrial Use

Facing South





**Pond Photograph Record** 

Project No. **Client Name:** Site Location: AEP 60683729 Anguin-Brie 138kV Transmission Line Project

PH-13

Date:

May 11, 2021 **Description:** 

Old Field

Facing South



## APPENDIX D AGENCY COORDINATION

#### Holmes, Joshua

From: Ohio, FW3 <ohio@fws.gov>
Sent: Tuesday, July 5, 2022 2:30 PM

To: Holmes, Joshua

**Cc:** Miller, Brian; ajtoohey@aep.com

**Subject:** [EXTERNAL] AEP - Anguin - Brie 138kV Transmission Line, Licking County, Ohio



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



Project Code: 2022-0045339

Dear Mr. Holmes,

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  $\geq 3$  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  $\geq 3$  inches dbh cannot be avoided, we recommend removal of any trees  $\geq 3$  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 <a href="mailto:mike.pettegrew@dnr.state.oh.us">mike.pettegrew@dnr.state.oh.us</a>.

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



## Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

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

hone: (614) 263-6621 Fax: (614) 267-4764

June 6, 2022

Brian Miller AECOM 681 Andersen Drive, Suite 120 Pittsburgh, Pennsylvania 15220, USA

Re: 22-0504; Anguin-Brie 138kV Transmission Line

**Project:** The proposed project involves constructing approximately 1.3-miles of a new 138kv transmission line located between the Proposed Brie Station and the existing Anugin Substation.

**Location:** The proposed project is located in Jersey Township, Licking 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 project is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, 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 bat species 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. The DOW recommends tree 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.

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 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 the fawnsfoot (*Truncilla donaciformis*), a state threatened 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 the lake chubsucker (*Erimyzon sucetta*) a state threatened fish. The DOW recommends no in-water 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 this or other aquatic species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with dense, tall growths of aquatic or semiaquatic vegetation (particularly cattail, sedge, rushes, arrowheads, or sawgrass) interspersed with clumps of woody vegetation and open water. Nests are made from dried vegetation suspended .5 to 2.5 feet above the water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, 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 April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction

should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this type of 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 US 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.

https://ohiodnr.gov/static/documents/water/floodplains/Floodplain%20Administrator%20List.pdf

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

Mike Pettegrew Environmental Services Administrator







# OHIO DIVISION OF WILDLIFE AND U.S. FISH AND WILDLIFE SERVICE (OH-FIELD OFFICE) JOINT GUIDANCE FOR BAT SURVEYS AND TREE CLEARING MAY 2022

This document has been updated with new state guidance for the 2022 field season.

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

#### **Agency Contacts:**

ODNR-DOW Permit Coordinator: Wildlife.Permits@dnr.ohio.gov, (614) 265-6315

ODNR-DOW Bat Survey Coordinator: Eileen Wyza, Eileen.Wyza@dnr.ohio.gov, (614) 265-6764

USFWS OHFO Endangered Species: Angela Boyer, angela boyer@fws.gov, (614) 416-8993, ext.122

#### **Covid-19 Guidance:**

Surveyors should follow all covid protocols put in place by their agency. All surveyors should wear masks when handling bats and anyone exhibiting symptoms of covid-19 should not participate in bat surveys.

#### Ohio Mist-net Surveys:

This document serves as guidance for bat mist netting activities in Ohio and does not supersede any requirements listed on your permits or facility certificate. All permit conditions must be strictly adhered to for permits to be valid and for renewal of permits beyond the existing year.

Due to the presence of White-nose Syndrome (WNS), mist-netting in Ohio must be conducted between June 1 and August 15 unless stated otherwise in your state permit. The ODNR Division of Wildlife (ODNR-DOW) and U.S. Fish and Wildlife Service (USFWS) Ohio Field Office (OHFO) have determined that delaying netting activities until June 1 will provide additional recovery time for bats affected by WNS. For presence/probable absence surveys, netting will not be accepted outside of the June 1 - August 15 timeframe.

To assess project areas for presence or probable absence of the state and federally listed Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) during summer residency, the USFWS developed the USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (March 2022). This protocol, <u>with minor modifications referenced below</u>, can also be used in Ohio for the 2022 field season and includes surveying for the state-listed little brown bat (*Myotis lucifugus*) and tricolored bat (*Perimyotis subflavus*).

According to the updated federal range-wide guidelines, presence/probable absence net surveys for northern longeared bats shall incorporate either 16 net nights per square 0.5 kilometer (123 acres) of project area, or four net nights per kilometer for linear projects. Presence/probable absence net surveys for Indiana bats shall incorporate nine net nights per square 0.5 kilometer (123 acres) of project area, or two net nights per kilometer for linear projects. If a project area is eligible for a presence/probable absence survey for both Indiana bats and northern long-eared bats, following the northern long-eared bat level of effort will qualify as a presence/ probable absence survey for both species. However, if a project area is eligible for a presence/absence survey for both species, following the Indiana bat level of effort will not qualify the survey for a northern long-eared bat presence/ probable absence survey.

The USFWS published a proposed rule to reclassify the northern long-eared bat as endangered on March 23, 2022. The USFWS must publish a final rule on the northern long-eared bat's status by the end of November 2022 to meet a federal court order. Project proponents may continue to use the current 4(d) rule while the northern long-eared bat remains listed as a threatened species. If the reclassification is finalized, the 4(d) rule will be nullified as the ESA does not allow application of 4(d) rules for species listed as endangered. Therefore, for proposed project activities that may impact northern long-eared bats with a possibility of not being completed prior to the final listing decision in November, we recommend that project proponents discuss with the Ohio Field Office to determine if surveys may be prudent to avoid potential delays to their project timelines resulting from a change to the northern long-eared bat's listing status.

Exception for Ohio mist-net surveys: All presence/absence surveys conducted for state listed bat species (Indiana, northern long-eared, little brown, tricolored) should follow the maximum net nights set forth in the federal guidance to be considered valid by ODNR-DOW. Any modifications to this position will be communicated at the time of the site authorization approval. As Ohio's laws do not have a similar liability exclusion comparable to the federal 4d Rule, additional surveys within an existing buffer may not be applicable to ODNR-DOW's recommendations on tree cutting.

#### **Ohio Acoustic Surveys:**

Acoustic bat surveys for presence/absence will be accepted by ODNR-DOW for the 2022 season. Surveys should follow guidelines laid out in the USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (March 2022) with the following exceptions:

- Ohio survey dates are June 1 August 15, 2022
- After conducting automated analyses using one or more of the currently available 'approved' acoustic bat ID programs<sup>1</sup>, qualitative analysis (i.e., manual vetting) of any calls recorded from state-endangered species (*M. sodalis, M. septentrionalis*<sup>2</sup>, *M. lucifugus*<sup>2</sup>, and *P. subflavus*<sup>2</sup>) must be completed.
- All presence/absence acoustic surveys conducted for state listed bat species (Indiana, northern longeared, little brown, tricolored) should follow the maximum acoustic nights set forth in the federal guidance to be considered valid by ODNR-DOW. Any modifications to this position will be communicated at the time of the site authorization approval.

At a minimum, for each detector site/night a program considered presence of state-listed bats likely, review all files (including no IDs) from that site/night. If more than one acoustic bat ID program is used, qualitative analysis must also include a comparison of the results of each program by site and night.

#### Before Field Season:

- Anyone surveying bats using mist-nets in the state of Ohio must obtain a federal permit as well as a state scientific collection permit. The federal permit should include both the Indiana bat and the northern longered bat.
- Your ODNR-DOW permit consists of two documents: a Scientific Collector (Wild Animal) Permit and an endangered species letter signed by the Chief of the Division of Wildlife (in addition to your federal permit).

<sup>&</sup>lt;sup>1</sup> https://www.fws.gov/media/indiana-bat-summer-survey-guidance

<sup>&</sup>lt;sup>2</sup> State listing as endangered effective July 1, 2020

Both ODNR-DOW documents must be obtained prior to field work and kept with you and any sub-permittees during field work.

#### **During Field Season:**

- Prior to initiation of field work (a minimum of two weeks in advance), permittees must provide proposed mist netting plans to USFWS and ODNR-DOW in the form of an e-mail letter to the USFWS OHFO and copy to the ODNR-DOW Bat Survey Coordinator. Plans must be reviewed and approved by USFWS OHFO and ODNR-DOW before ANY surveys take place. Study plans must specify objectives, location details, dates of proposed work, and all other relevant details. When handling bats, you must strictly adhere to the current WNS Decontamination Protocol (current version can be found at
- https://www.whitenosesyndrome.org/topics/decontamination). Clothing, boots, gear, and equipment should all be thoroughly decontaminated between nights, as well as between netting sites.
- Request bat bands at least two weeks in advance of needing them. Bat bands can be obtained by emailing the ODNR-DOW Bat Survey Coordinator with how many bands are needed, current permit number, sizes, and a mailing address. Bands will not be issued until your permits are valid. We have two sizes of bands—2.4 mm and 4.2 mm. The 2.4 mm split metal bat ring made of aluminum alloy is suitable for banding small bats. This band must be placed on all captured Indiana, northern long-eared, little brown, and tricolored bats. The larger 4.2 mm band is suitable for silver-haired (*Lasionycteris noctivagans*), big brown (*Eptesicus fuscus*), and hoary (*Lasiurus cinereus*) bats. You must band all Indiana, northern longeared, little brown, and tricolored bats with ODNR-DOW bands; therefore, you should not be in the field without the 2.4 mm sized band.
- Only individuals who are named on the ODNR-DOW endangered species letter portion of the permit and on the corresponding federal bat permit may conduct and oversee mist-net surveys. Trained assistants may work on permitted bat activities under the direct and on-site supervision of a named permittee. All bat IDs must be verified by a named permittee. If an Indiana bat and/or northern long-eared bat is captured, the permittee shall notify the USFWS and the ODNR-DOW Bat Survey Coordinator referenced above within 48 hours via email. If a little brown bat or tricolored bat is captured, notify the ODNR-DOW Bat Survey Coordinator only within 48 hours via email. Reports of listed bat captures should include specific information such as spatial location of capture, band information, radio-transmitter frequency information, sex, reproductive status, and age of individual.
- For presence/absence surveys, ODNR-DOW requires all female and juvenile state endangered and threatened bat species (Indiana, northern long-eared, little brown, and tricolored bat) be radio-tracked if caught, in accordance with methods outlined in Appendix D of USFWS 2022 Range-wide Indiana Bat Summer Survey Guidelines.
- If you are taking any biological samples (tissue, fur, blood, etc.), this must be specifically authorized in your state and federal permits and noted in your survey proposal.

#### **After Field Season:**

By March 15, you must submit your final ODNR-DOW report(s) from the previous summer. You are not required to fill out the ODNR-DOW Wildlife Diversity Bat Excel Spreadsheet; instead, please forward your USFWS Midwestern US Spreadsheet (found here: <a href="https://www.fws.gov/media/bat-reporting-spreadsheets-2020-2021">https://www.fws.gov/media/bat-reporting-spreadsheets-2020-2021</a>) to the ODNR-DOW Bat Survey Coordinator and ODNR-DOW Permit Coordinator and include your state permit number along with an electronic copy of the project report. Electronic summaries emailed during the field season are NOT considered as full compliance of this reporting requirement.

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

**Step 1:** Coordinate with Ohio Division of Wildlife (DOW) regarding existing records for state-listed endangered bat summer and/or winter occurrence information. Potential hibernacula found during a habitat assessment must address possible suitability for Indiana bats, northern long-eared bats, tricolored bats, and little brown bats.

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

- For state-listed endangered species other than the Indiana bat, a recommendation of 0.25-mile tree cutting buffer around all known entrances to protect existing conditions at the hibernaculum(a). The U.S. Fish and Wildlife Service (USFWS) should be contacted for guidance on projects occurring within 5 miles of known or potential Indiana bat hibernacula. If the project involves subsurface disturbance, consultation with DOW is required.
- Limited tree cutting may be permitted within the buffer. Coordinate with DOW.

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

- Conduct a desktop habitat assessment of the project area. Tools such as the <u>ODNR Mines of Ohio Viewer</u>, <u>Karst Interactive Map</u>, topographic maps, aerial photos, historical records, etc. should be used to determine if there are any potential caves, mines, karst features, rock ledges, or other features that may serve as potential hibernacula.
  - If no such features are found, proceed to Step 2.
  - If potential hibernacula are found during the desktop assessment:
    - Assume bats are using these hibernacula and refrain from clearing trees from March 15-November 15

-Or-

- Conduct a field habitat assessment to determine if a potential hibernaculum(a) is present within the action area. We encourage impacts to ledges and rock outcroppings be avoided. If impacts cannot be avoided, features should be evaluated for potential roosting characteristics such as recesses, overhangs, and crevices.
- **NOTE**: The USFWS Range-wide Indiana Bat Guidelines, Appendix H, contains instructions for completing a habitat assessment, but only includes criteria for Indiana bat hibernacula.
- Step 2: When conducted, a presence/absence survey must follow current DOW guidelines.

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

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

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

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

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

#### **FREQUENTLY ASKED QUESTIONS**

#### When does the ODNR-DOW Bat Survey protocol have to be used?

This protocol should be used anytime Indiana bat, northern long-eared bat, little brown bat, or tricolored bat summer presence/probable absence surveys are conducted in the state of Ohio.

#### How many detector nights are required for presence/probable absence acoustic surveys?

As described in the current USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines:

<u>Level of effort for all state-listed endangered bat species</u> including Indiana bat and northern long-eared bats: Follow maximum detector nights as outlined in the federal guidance (for northern long-eared bat).

#### Northern Long-eared Bat Level of Effort:

<u>Linear projects</u>: a minimum of 4 detector nights per km (0.6 miles) of suitable summer habitat <u>Non-linear projects</u>: a minimum of 14 detector nights per 123 acres (0.5 km²) of suitable summer habitat. At least 2 detector locations per 123 acre "site" shall be sampled until at least 8 detector nights has been completed over the course of at least 2 calendar nights (may be consecutive). For example:

- 4 detectors for 3 nights and 1 detector for 2 nights each (can sample the same location or move within the site)
- 2 detectors for 7 nights each (can sample the same location or move within the site)
- 1 detector for 14 nights (must sample at least 2 locations and move within the site we recommend evenly distributing LOE among locations)

#### Indiana Bat Level of Effort:

<u>Linear projects</u>: a minimum of 4 detector nights per km (0.6 miles) of suitable summer habitat <u>Non-linear projects</u>: a minimum of 10 detector nights per 123 acres (0.5 km²) of suitable summer habitat. At least 2 detector locations per 123 acre "site" shall be sampled until at least 8 detector nights has been completed over the course of at least 2 calendar nights (may be consecutive). For example:

- 5 detectors for 2 nights each (can sample the same location or move within the site)
- 2 detectors for 5 nights each (can sample the same location or move within the site)
- 1 detector for 10 nights (must sample at least 2 locations and move within the site we recommend evenly distributing LOE among locations)

#### How many net surveys are required for presence/probable absence?

<u>Level of effort for all state-listed endangered bat species</u> including Indiana bat and northern long-eared bats: Follow maximum net nights as outlined in the federal guidance (for northern long-eared bat).

Net surveys for northern long-eared bat presence/probable absence shall incorporate, at a minimum, either 16 net nights per square 0.5 kilometer (123 acres) of project area, or four net nights per kilometer for linear projects. For linear projects, there must be at least one net night of survey on two different nights (minimum of two nights). This does not allow for two net nights on a single night for surveys.

Net surveys for Indiana bat presence/probable absence shall incorporate, at a minimum, either nine net nights net nights per square 0.5 kilometer (123 acres) of project area, or two net nights per kilometer for linear projects. For linear projects, there must be at least one net night of survey on two different nights (minimum of two nights). This does not allow for two net nights on a single night for surveys.

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

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

#### When can acoustic or net surveys occur in Ohio?

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

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

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

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

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

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

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

#### Where do I get bands?

If you need bands, email the ODNR-DOW Bat Survey Coordinator at least two weeks in advance with your current ODNR permit number, how many bands in each size (2.4 and 4.2 mm) you will need this season, and a current address to ship the bands.

#### Do I have to band every bat?

No, currently this is optional. However, you are required as per your state permit to band all Indiana, northern long-eared, little brown, and tricolored bats.

## APPENDIX E DESKTOP ASSESSMENT FOR WINTER BAT HABITAT

American Electric Power 8600 Smith's Mill Road New Albany, OH 43054 ajtoohey@ aep.com



May 10, 2022

Attention: Mr. John Kessler

Ohio Department of Natural Resources

2045 Morse Road, Building E-2 Columbus, Ohio 43229-6693

Via email: <a href="mailto:environmentalreviewrequest@dnr.state.oh.us">environmentalreviewrequest@dnr.state.oh.us</a>; <a href="mailto:NHDRequest@dnr.state.oh.us">NHDRequest@dnr.state.oh.us</a>; <a href="mailto:nh.state.oh.us">nHDRequest@dnr.state.oh.us</a>; <a href="mailto:nh.state.oh.us">nHD

Reference: Request for Technical Assistance, Anguin-Brie 138kV Transmission Line

Project, Licking 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 Anguin-Brie 138kV Transmission Line Project (Project) in Licking County, Ohio. The Project consists of constructing approximately 1.3-miles of a new 138kv transmission line located between the Proposed Brie Station and the existing Anugin Substation. A Study Area composed of all Project components is located on the Jersey and New Albany, Ohio U.S. Geologic Survey 7.5' topographical quadrangles as displayed on Project Overview Map (Figure 1).

AECOM completed a desktop review of publicly available data to identify underground voids which could be potential hibernation sites for overwintering bats (hibernacula) within 0.25-miles 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, no documented underground or surface mines as well as mine entrances or openings within 0.25-mile of the Project. Additionally, no karst features were identified within 0.25-mile of the Project. The closest feature is 2.6-miles northwest. Therefore, the Project activities are not likely to significantly affect any potential hibernacula associated with karst features outside of the 0.25-mile of the Project area.

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,

Brian Miller

**Environmental Project Manager** 

Phone: (412-667-9172) brian.miller1@aecom.com

Frang Malle



Attachments: Figure 1 – Topographic Project Overview

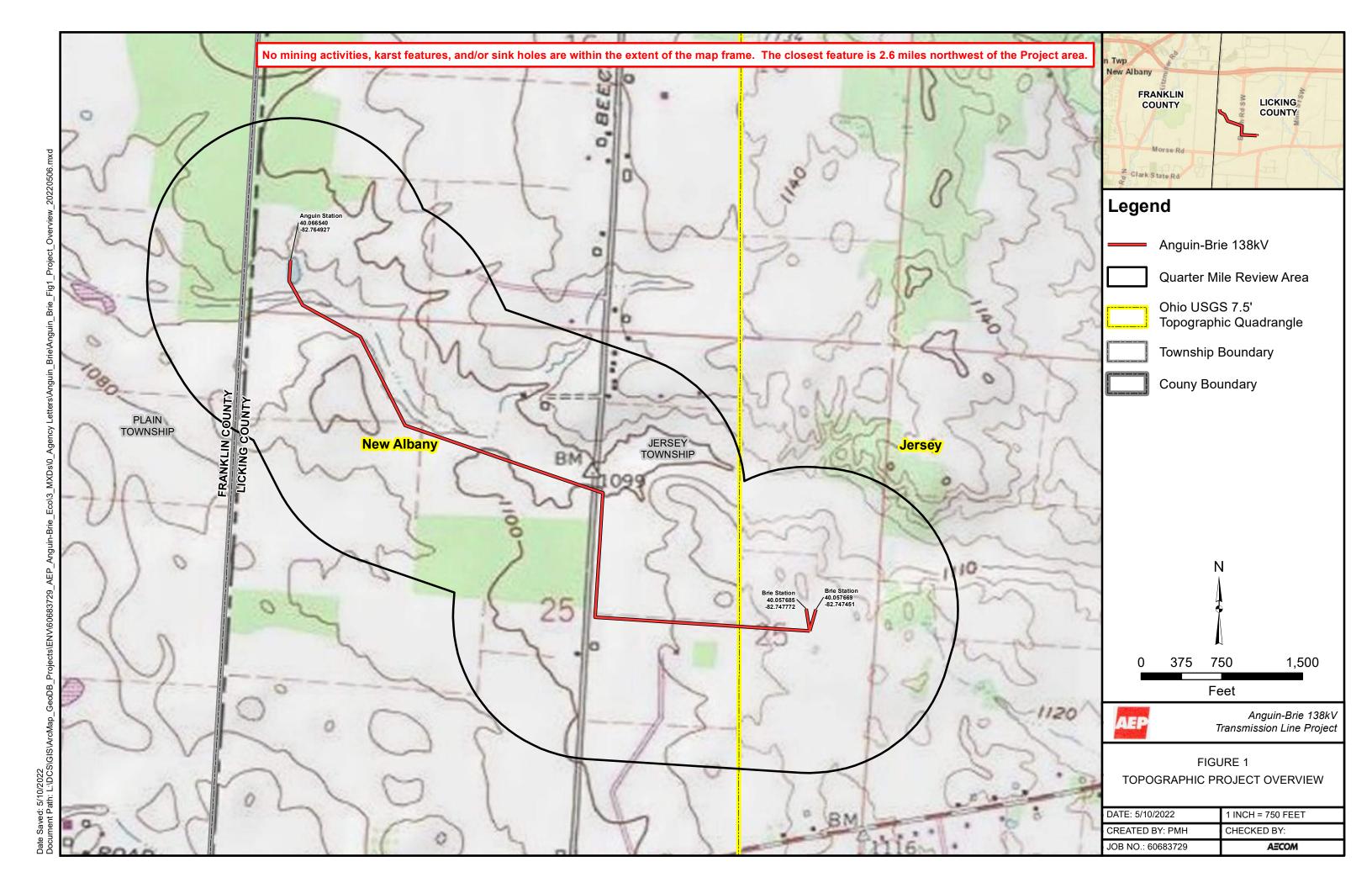
Figure 2 – Aerial Project Overview Natural Heritage Data Request Form

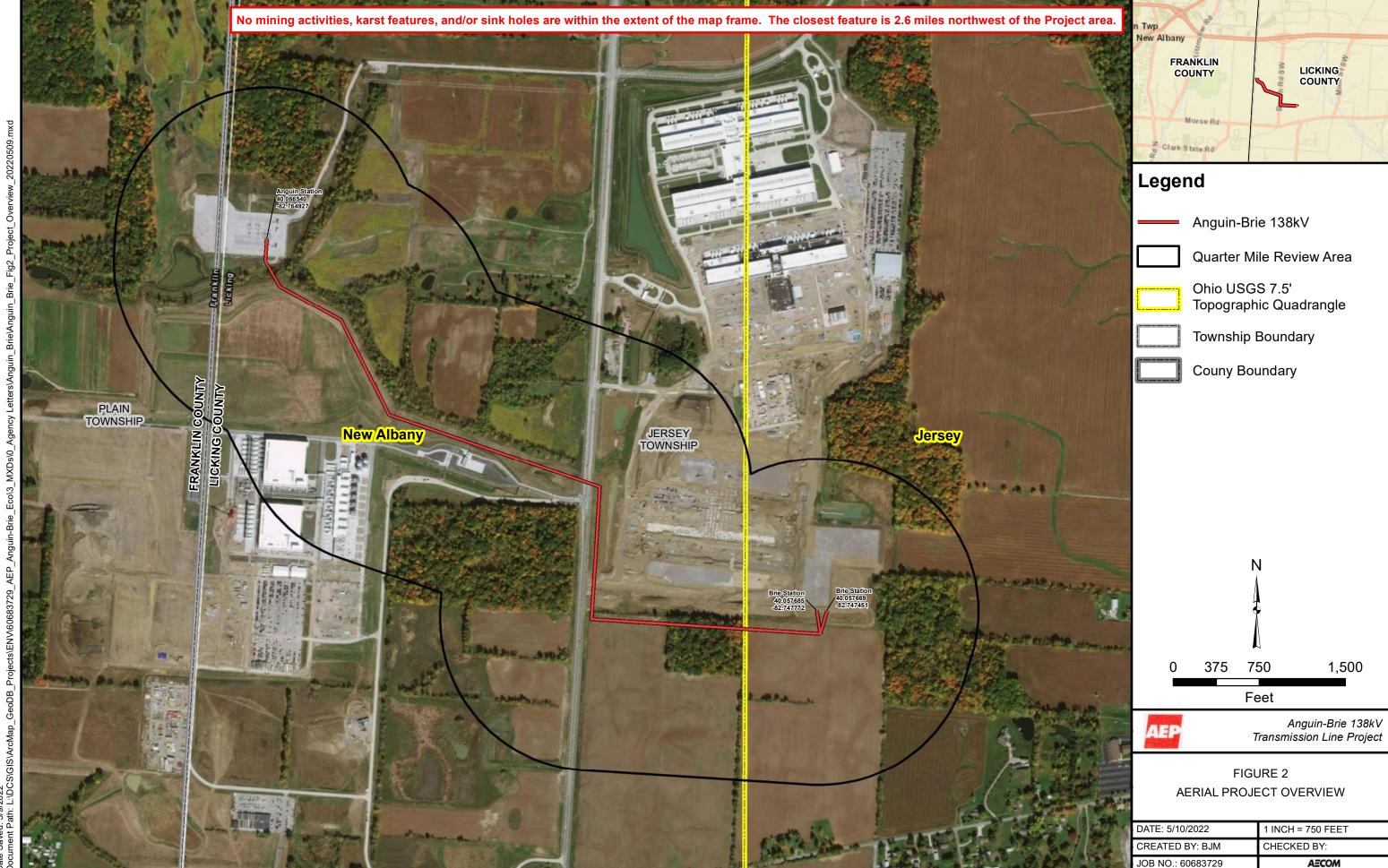
Electronic Shapefiles (.shp)

Cc: Amy J. Toohey

Environmental Specialist-Consultant Phone: (614-565-1480)

Phone: (614-565-1480 ajtoohey@aep.com





## ANGUIN-BRIE 138KV TRANSMISSION LINE PROJECT

## LICKING COUNTY, OHIO

## ADDENDUM ECOLOGICAL 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 #: 60683729

October 2022



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#### Number

APPENDIX A	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)
APPENDIX B	OEPA Stream Data Forms / Delineated Features Photographs (combined per stream and shown in numerical order)
APPENDIX C APPENDIX D	Upland Drainage Features Photographic Record Pond Photographic Record

#### 1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing installation of a new customer driven substation and associated transmission line routes as part of the Anguin-Brie Projects located in Licking County, Ohio. The purpose of this component is for the construction of a new 1.3 miles of a greenfield 138kV transmission line between the existing Anguin Station and proposed Brie Station known as the Anguin-Brie 138kV Transmission Line (Project). The Addendum Survey Area associated with this Report was conducted to account for the addition of two new pull sites. The Addendum Survey Area is comprised of 4.57 acres. This Addendum Project Survey Area is located on the New Albany and Jersey, Ohio U.S. Geologic Survey 7.5' topographical quadrangles as displayed on Project Overview Map (**Figure 1**).

The purpose of the field survey was to assess the presence of wetlands and other "waters of the United States" (WOTUS) that occur within the proposed Addendum Project Survey Area. Secondarily, land uses were also recorded to classify and characterize potential habitat for rare, threatened, and endangered species. This report will be used to assist AEP Ohio Transco's efforts to identify potential WOTUS and rare, threatened, and endangered species habitat present along the proposed Project alignment to avoid or minimize impacts during construction activities

#### 2.0 METHODOLOGY

A comprehensive methodology of the field surveys and data reviews completed for this report are included within the August 2022- Original Report and a brief summary of the delineation and agency coordination methodology has been provided below.

The field survey was conducted in two location that were expanded for the addition of two new pull sites that compose an Addendum Project survey area of approximately 4.57 acres. Prior to conducting field surveys, digital U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) data, and U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), FEMA 100-year floodplain data (FEMA), and USGS 7.5-minute topographic maps were reviewed as an exercise to identify the occurrence and location of potential wetland areas.

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

Using OEPA's Qualitative Habitat Evaluation Index (Rankin, 2006) and in the OEPA's Field Methods for Evaluating Primary Headwater Streams in Ohio (OEPA, 2020).

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

Initial coordination from the Ohio Department of Natural Resources (ODNR) Office of Real Estate – Environmental Review Section and the United States Fish and Wildlife Service (USFWS) Ohio Ecological Services Field Office soliciting comments on the proposed Project. Responses were received in March and February 2022, respectively. AECOM supplemented the original agency coordination with inquires to the USFWS Information for Planning and Consultation (IPaC) online tool and reviewed the county list of rare, threatened, and endangered species from the ODNR website. Based on review of the online resources and the Addendum Study Areas abutting the previous review areas, no further threatened and/or endangered species coordination was warranted, and the original assessment completed in the August 2022 – Original Report does not need revised and/or edited.

#### 3.0 RESULTS

On September 22, 2022, AECOM ecologists walked the Addendum Survey Area to conduct the wetland delineation, stream assessment and habitat survey. Within the Addendum Study Area, AECOM delineated one wetland and one stream. The locations and approximate extent of the wetlands and streams identified within the Project Addendum Study Area and August 2022 – Original Report are shown on **Figure 3**. Completed USACE data forms, ORAM form and wetland photographs within of the Addendum Survey Area are provided as **Appendix A** and **stream forms and photographs are provided as <b>Appendix B**. Data forms, photographs, tables, and additional information on all other previously delineated features are contained within the August 2022 – Original Report. 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, three soil series are mapped within the Addendum Survey

Area (USDA NRCS 2021a and 2021b). Of these, one soil map unit is identified as hydric, comprising approximately 50.4% of the mapped unit areas. **Table 1** below provides a detailed overview of all soil series and soil map units present within the Project survey area. Soil map units located in the addendum Project survey area and vicinity are shown on **Figure 2**.

TABLE 1 - SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE ADDENDUM PROJECT SURVEY AREA

Soil Series	Map Unit Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Bennington	BeA	Bennington silt loam, 0 to 2 percent slopes	Drainageways, depressions	No	Condit 5% Pewamo, low carbonate till 3%
Centerburg	Cen1B1	Centerburg silt loam, 2 to 6 percent slopes	Drainageways, depressions	No	Condit 4% Marengo 3%
Centerburg	Cen1C2	Centerburg silt loam, 6 to 12 percent slopes	Drainageways, depressions	No	Condit 4%
Pewamo	Pe	Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes	Drainageways, depressions	Yes	Condit 9% Pewamo, low carbonate till 85%

#### 3.1.2 NATIONAL WETLAND INVENTORY MAP REVIEW

According to NWI data covering the Project location, the addendum Project survey area does not contain any mapped NWI wetlands

#### 3.1.3 DELINEATED WETLANDS

During the field survey, AECOM identified one wetland, W-MRK-001, a category 1 PEM wetland. The boundaries newly delineated wetland and previously delineated wetland boundaries are provided on **Figure 3**.

AECOM has given the wetland within the Addendum Survey Area a provisional determination of jurisdictional (non-isolated, i.e., WOTUS). Final jurisdictional status can only be determined by the USACE, and AECOM assessments are provisional. The locations and approximate extent of the wetlands identified within the Project survey area is shown on **Figure 3**. Details for each delineated wetland in the survey area are provided in **Table 3**. Completed USACE data forms, ORAM forms, and photographs of each wetland are provided in **Appendix A**.



TABLE 3 – SUMMARY OF DELINEATED WETLANDS WITHIN ADDENDUM PROJECT SURVEY AREA

				•	<u> </u>			THIN ADDENDON FROJECT SORVET AREA								
Wetland ID	Loc	Location		Habitat	Delineated Area	ORAM		Nearest Structure #	Existing Structur	Proposed Structure	Structure Installation	Proposed Impacts				
	Latitude	Longitude	- Isolated?	Type	(acre)	Score	Category	(Existing / Proposed)	e # in Wetland	# in Wetland	Method	Temporary Matting Area (acre)	Permanent Impact Area (acre)			
W-CMS-001	40.065766	-82.765490	No	PEM	0.245	15.0	1	(Anguin 138kV Tline) Proposed Structure 1	None	None	TBD	N/A	N/A			
W-CMS-002	40.065123	-82.765891	No	PEM	0.616	18.0	1	(Anguin 138kV Tline) Proposed Structure 2	None	None	TBD	N/A	N/A			
W-CMS-003	40.061245	-82.756309	No	PEM	0.316	21.0	1	(Anguin 138kV Tline) Proposed Structure 7	None	Structure 7	TBD	0.043	<0.01			
W-CMS-004	40.057441	-82.755511	No	PEM	0.105	12.0	1	(Anguin 138kV Tline) Proposed Structure 10 Pull Site Only	None	None	TBD	N/A	N/A			
	40.057542	-82.751661	Yes	PEM	0.142	50.0	- 50.0	2	(Anguin 138kV Tline) Proposed	None	None	TBD	N/A	N/A		
W-CMS-005	40.057350	-82.751703	res	PFO	0.022			50.0	2	2	2	2	Structure 11 to 12	None	None	TBD
W-CMS-006	40.057040	-82.751804	Yes	PFO	0.115	58.5	2	(Anguin 138kV Tline) Proposed Structure 11 to 12	None	None	TBD	N/A	N/A			
W-CMS-007	40.057027	-82.750936	Yes	PFO	0.118	49.0	2	(Anguin 138kV Tline) Proposed Structure 11 to 12	None	None	TBD	N/A	N/A			



Wetland ID	Location		Isolated?	Habitat	Delineated	ORAM		Nearest Structure #	Existing Structur	Proposed Structure	Structure	Proposed Impacts		
	Latitude	Longitude	isolated?	Type	Area (acre)	Score	Category	(Existing / Proposed)	e # in Wetland	# in Wetland	Installation Method	Temporary Matting Area (acre)	Permanent Impact Area (acre)	
W-CMS-008	40.058298	-82.745627	No	PFO	0.186	55	2	Anguin 138kV Tline Proposed	None	None	TBD	N/A	N/A	
W-CIMS-006	40.058245	-82.745578	No	PUB	0.048	33	2	2	Structure 13 A/B	None	None	TBD	N/A	N/A
W-CMS-011	40.057437	-82.749860	Yes	PEM	0.053	13.0	1	(Anguin 138kV Tline) Proposed Structure 12	None	None	TBD	N/A	N/A	
W-MRK-001	40.061987	-82.754015	No	PEM	0.363	19	1	(Anguin 138kV Tline) Proposed Structure 8	None	None	TBD	N/A	N/A	
P-CMS-001	40.064457	-82.764882	*	*	3.300	-	-	(Anguin 138kV Tline) Proposed Structure 2	None	None	TBD	N/A	N/A	
P-CMS-002	40.060863	-82.756054	*	*	0.091	-	-	(Anguin 138kV Tline) Proposed Structure 7	None	None	TBD	N/A	N/A	
P-CMS-003	40.060313	-82.754153	*	*	0.666	-	-	(Anguin 138kV Tline) Proposed Structure 8	None	None	TBD	N/A	N/A	
P-MRK-001	40.061987	<u>-82.754015</u>	*	*	0.066			(Anguin 138kV Tline) Proposed Structure 8	None	None	TBD	N/A	N/A	
Total:					6.386							0.043	<0.01	

<sup>\*</sup> Feature is a manmade stormwater retention pond and not eligible for scoring under ORAM



#### 3.2 STREAM DELINEATION

During the field survey, one stream (intermittent) was identified within the Addendum Survey Area and was classified as Modified Class 1 PHW. The stream had no existing OEPA Aquatic Life Use Designation.

AECOM has provided a provisional determination that the delineated stream within the Addendum Survey Area appears to be jurisdictional (i.e., WOTUS), based on their observed or presumed confluence with downstream waters. Final jurisdictional status can only be determined by the USACE and AECOM assessments are provisional. A summary of the delineated features is provided in **Table 4**. Stream data forms and photographs of each delineated stream resource are provided in **Appendix B**.

# 3.2.1 OEPA STREAM ELIGIBILITY

OEPA stream eligibility for 401 Water Quality Certification mapping was reviewed for all of the delineated streams. The Project occurs across two watersheds, designated by 401 WQC eligibility, as listed in **Table 5**. These watersheds are listed as "eligible" and "possibly eligible". OEPA stream eligibility mapping for the Project vicinity, is provided on **Figure 4**.

#### 3.3 FEMA 100 YEAR FLOODPLAINS

Mapped FEMA designated 100-year floodplains and floodways are displayed on **Figure 2** and no regulated FEMA 100-year floodplains and/or floodways are located within the addendum Project area.



# TABLE 4 - SUMMARY OF DELINEATED STREAMS WITHIN THE ADDENDUM PROJECT SURVEY AREA

Stream ID	Loc	ation	Stream	Stream Name	Delineated Length	Bankfull Width	OHWM Width		Field	d Evaluation	Ohio EPA 401	Stream	Proposed	Impacts
Stream in	Latitude	Longitude	Туре	Stream Name	(feet)	(feet)	(feet) (feet)	Method	Score	Classification / Rating / OAC Designation	Eligibility	Crossing?	Fill Type	Length (LF)
S-CMS-001	40.065798	-82.764697	Intermittent	UNT to Blacklick Creek	21	2.5	2	HHEI	15	Class 1 PHW	Eligible	No	None	0
S-CMS-002	40.065055	-82.763003	Perennial	UNT to Blacklick Creek	2951	22	20	QHEI	42	Poor	Eligible	No	None	0
S-CMS-003	40.061247	-82.756826	Perennial	UNT to Blacklick Creek	236	3	3	HHEI	28	Modified Class 1 PHW	Eligible	Yes - Air Bridge	Temporary	<0.01
S-CMS-004	40.057691	-82.745594	Intermittent	UNT to South Fork Licking River	349	3.5	3	HHEI	45	Class 2 PHW	Eligible	No	None	0
S-MRK-001	40.061355	-82.754180	Intermittent	UNT To Blacklick Creek	<mark>295</mark>	3.5	<mark>1.5</mark>	HHEI	43	Modified Class 1 PHW	Eligible	No	None	0
Total:					3,557									<0.01

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TABLE 5- SUMMARY OF WATERSHED 401 WQC ELIGIBILITY WITHIN THE ADDENDUM PROJECT SURVEY AREA

HUC-12	Watershed	401 WQC Eligibility	Number of Stream Assessments
050400060402	Headwaters South Fork Licking River	Eligible	0
050400060401	Headwaters Blacklick Creek	Possibly Eligible	1
		Total	1

#### 3.4 UPLAND DRAINAGE FEATURES WITHIN THE ADDENDUM PROJECT SURVEY AREA

One upland drainage feature (UDF-MRK-001) was identified within the Addendum Survey Area. Based on the site investigation, the UDF lacked a significant nexus to a jurisdictional WOTUS. Photographs of the upland drainage feature is provided in **Appendix C**.

#### 3.5 PONDS

One pond (P-MRK-001) was was identified within the Addendum Survey Photographs of the pond feature are provided in **Appendix D**.

#### 3.6 VEGETATIVE COMMUNITIES WITHIN THE ADDENDUM PROJECT SURVEY AREA

AECOM ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys. A variety of woody and herbaceous lands, as described in **Table 6**, below, are present within the Project survey area, including old field, agricultural land, successional hardwood woodlands, pasture/hay fields, residential landscaped areas, stream/wetland areas, and urban areas. Habitat descriptions applicable to the Project are provided below. Vegetative communities are depicted visually on aerial photography in **Figure 5**.

TABLE 6- VEGETATIVE COMMUNITIES WITHIN THE ADDENDUM PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage Within the Project Survey Area	Approximate Percentage Within the Project Survey Area
Agricultural	Includes fields planted in row-crop such as corn, soybean or winter wheat.	0.42	9.2
Developed Open Space	Developed open space 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.	1.9	41.6
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey area 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 survey areas and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs.	1.58	34.6
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.	0.33	7.2
Wetlands/Streams	Streams and wetlands were observed both within and beyond the survey area for the Project.	0.34	7.4
Totals:		4.57	100%

#### 3.7 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

### Protected Species Agency Consultation -

Within the August 2022 Report, a total of nine species were identified within range of the Project. Of these nine species, four bat species were identified as displaying summer roosting habitat within the original survey area included within the August 2022 Report. Regarding the Addendum Survey Area, the current land use was identified as actively disturbed by others or undergoing remedial activities from previous industrial developments. Therefore, no forested and/or other potential habitats for the listed species were identified within the Addendum Survey Area. A species list and overall assessment of the potential for rare, threatened and endangered species, is provided within the August 2022 report.

#### 4.0 SUMMARY

The ecological survey of the Addendum Survey Area identified a total of one wetland and one stream. The wetland within the Project was a Category 1 PEM wetland. The wetland has been provisionally classified as jurisdictional WOTUS. The stream identified within the addendum Project survey area was an intermittent stream. An HHEI assessments was conducted, and the streams was classified as a modified



class 1 PHWstream. AECOM has preliminary determined that the assessed stream within the Project survey corridor appear to be jurisdictional (i.e., WOTUS).

The reported results of the ecological survey conducted by AECOM on this Addendum to the Project are limited to the areas within the Addendum Project survey area provided in **Figure 3**. Areas that fall outside of the Addendum Project survey area 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 survey 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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# **APPENDIX A**

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

OEPA WETLAND ORAM FORMS

DELINEATED FEATURES PHOTOGRAPHS (WETLANDS)

### **WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Anguin 138kV Extension No 4/Anguin-Brie 138 kV R0	Cit	y/County:	Licking	Sampling Date: 22-Sep-22
Applicant/Owner: AEP			State:	OH Sampling Point: P-MRK-001 Pond
Investigator(s): MRK, LMP	S	Section, Town	ship, Range:	S T 2N R 15W
Landform (hillslope, terrace, etc.): Bench		L	.ocal relief (c	oncave, convex, none): concave
Slope:/		Long.:	-82.754015	Datum: NAD83
Soil Map Unit Name: BeA: Bennington silt loam, 0 to 2 percen	t slopes			NWI classification: NA
Are climatic/hydrologic conditions on the site typical for this time of year	ar? Yes	● No ○	(If no, ex	plain in Remarks.)
	gnificantly dist	turbed?	Are "No	ormal Circumstances" present? Yes   No
Are Vegetation , Soil , or Hydrology na	turally proble	matic?	(If need	ded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map show			•	, , ,
Hydrophytic Vegetation Present? Yes   No				
Hydric Soil Present? Yes   No			Sampled A	
Wetland Hydrology Present? Yes   No		***************************************	. a victiana	res © NO C
Remarks: This man-made pond is located on a hillside bench that is continto wetland W-MRK-001 and an intermittent watercourse.  VEGETATION - Use scientific names of plant		control sto	rmwater ar	nd sediment on the industrial site. Water drains to the south
	Absolute	- Species? - Rel.Strat.	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30' radius )	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC:1(A)
2		0.0%		Total Number of Dominant
3		0.0%		Species Across All Strata: (B)
5.	0	0.0%		Percent of dominant Species
	0	= Total Cove		That Are OBL, FACW, or FAC: 50.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15' radius )		100010010	••	Prevalence Index worksheet:
1.	0	0.0%		Total % Cover of: Multiply by:
2.	0	0.0%		OBL species 0 x 1 = 0
3.	0	0.0%		FACW species $10   x 2 = 20$
4	0	0.0%		FAC species <u>0</u> x 3 = <u>0</u>
5	0	0.0%		FACU species <u>10</u> x 4 = <u>40</u>
Herb Stratum (Plot size: 5' radius )	0	= Total Cove	er	UPL species 0 x 5 = 0
1, Echinochloa crusgalli	10	<b>✓</b> 50.0%	FACU	Column Totals: <u>20</u> (A) <u>60</u> (B)
2. Persicaria pensylvanica	10	<b>✓</b> 50.0%	FACW	Prevalence Index = B/A = 3.000
3	0	0.0%		Hydrophytic Vegetation Indicators:
4	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation
5.		0.0%		2 - Dominance Test is > 50%
6. 7.		0.0%		✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
8.				$\Box$ 4 - Morphological Adaptations $^1$ (Provide supporting
9.	0 0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	20	= Total Cove	er	$rac{1}{2}$ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	0	0.0%		
2.	0	0.0%		Hydrophytic Vegetation
	0	= Total Cove	er	Present? Yes No
Remarks: (Include photo numbers here or on a separate sh Hydrophytic vegetation is limited to pond edge of open water	,			

SOIL Sampling Point: P-MRK-001 Pond

rescribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  IA	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  TOTAL Add Top Indicator (A12)  Solor (moist)  Mois Type 1  Loc2  PL  Tope 1  Select (Moist)  Matrix, CS=Covered or Coated Sand Grains.  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)	Silty Clay Loam  25% mixed rock  Location: PL=Pore Lining. M=Matrix.  Indicators for Problematic Hydric Soils 3:  Coast Prairie Redox (A16) Dark Surface (S7) Iron Manganese Masses (F12) Very Shallow Dark Surface (TF12)
p-12 10YR 4/2 90 10YR 4/6 10 C PL SIRy Clay Loam 25% eixed rock  ype: C-Concentration, D-Depleton, RM-Reduced Matrix, CS-Covered or Coated Sand Grains.  ypeic C-Concentration, D-Depleton, RM-Reduced Matrix, CS-Covered or Coated Sand Grains.  ypeic C-Concentration, D-Depleton, RM-Reduced Matrix, CS-Covered or Coated Sand Grains.  ypeic C-Concentration, D-Depleton, RM-Reduced Matrix, CS-Covered or Coated Sand Grains.  ypeic C-Concentration, D-Depleton, RM-Reduced Matrix, CS-Covered or Coated Sand Grains.  ypeic C-Concentration, D-Depleton, RM-Reduced Matrix, CS-Covered or Coated Sand Grains.  ypeic C-Concentration, D-Depleton, RM-Reduced Matrix, CS-Covered or Coated Sand Grains.  ### ### ### ### ### ### ### ### ### #	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Redox Dark Surface (F6)	Location: PL=Pore Lining. M=Matrix.  Indicators for Problematic Hydric Soils <sup>3</sup> :  Coast Prairie Redox (A16) Dark Surface (S7) Iron Manganese Masses (F12) Very Shallow Dark Surface (TF12)
Histosol (A1)   Sandy Gleyed Matrix (S4)   Coast Prairie Redox (A16)   Dark Surface (S7)   Dark Surface (S	Histosol (A1)  Sandy Gleyed Matrix (S4)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Gleyed Matrix (S4)  Stripped Matrix (S6)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Pepleted Matrix (F3)	Indicators for Problematic Hydric Soils <sup>3</sup> :  Coast Prairie Redox (A16) Dark Surface (S7) Iron Manganese Masses (F12) Very Shallow Dark Surface (TF12)
Histosol (A1) Histosol (A2) Histosol (A3) Histosol (A3) Sandy Gleyed Matrix (54) Sandy Redox (55) Black Histo (A3) Stripped Matrix (59) Black Histo (A3) Stripped Matrix (59) Black Histo (A3) Stripped Matrix (59) Dark Surface (57) Depleted Below Dark Surface (A11) Dark Surface (A12) Depleted Dark Surface (A12) Dark Surface (A12) Depleted Dark Surface (A12) Depleted Dark Surface (A12) Dark Surface (A12) Depleted Dark Surface (A12) Dark Surface (A12) Depleted Dark Surface (A12) Dark S	Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Gleyed Matrix (S4)  Stripped Matrix (S5)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)	Indicators for Problematic Hydric Soils <sup>3</sup> :  Coast Prairie Redox (A16)  Dark Surface (S7)  Iron Manganese Masses (F12)  Very Shallow Dark Surface (TF12)
Histosol (A1)   Sandy Gieyed Matrix (S4)   Coast Prairie Redox (A16)   Back Histic (A3)   Stripped Matrix (S5)   Dark Surface (S7)   Dark Surface (TF12)   Depleted Below Dark Surface (TF12)   Depleted Below Dark Surface (A10)   Depleted Below Dark Surface (A11)   Depleted Below Dark Surface (A11)   Depleted Below Dark Surface (A11)   Depleted Below Dark Surface (A12)   Depleted Below Dark Surface (A12)   Depleted Below Dark Surface (A12)   Depleted Dark Surface (F7)   Sandy Muck Mineral (S1)   Depleted Dark Surface (F7)   Sandy Muck Mineral (S1)   Depleted Dark Surface (F7)   Sandy Muck Mineral (S1)   Depleted Dark Surface (F7)   Sandy Muck Pear or Peat (S3)   Redox Depressions (F8)   Trunk Pear (F7)   Redox Depressions (F8)   Redox Depth (F8)   Re	Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Loamy Redox (S5)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)	Coast Prairie Redox (A16)  Dark Surface (S7)  Iron Manganese Masses (F12)  Very Shallow Dark Surface (TF12)
Islistoo (A1)	Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Redox (S5)  Stripped Matrix (S6)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)	Coast Prairie Redox (A16)  Dark Surface (S7)  Iron Manganese Masses (F12)  Very Shallow Dark Surface (TF12)
Institute Epipeoon (A2)   Sandy Redox (S5)   Dark Surface (S7)   Dark Surface (S7)   Phytrogen Sulfide (A4)   Loamy Mucky Mineral (F1)   Iron Manganese Masses (F12)   Very Shallow Dark Surface (TF12)   Depleted Below Dark Surface (A11)   Redox Dark Surface (A11)   Redox Dark Surface (A12)   Depleted Dark Surface (A11)   Redox Dark Surface (A12)   Depleted Dark Surface (A12)   Depleted Dark Surface (A12)   Depleted Dark Surface (A12)   Depleted Dark Surface (A12)   Sandy Muck Mineral (S1)   Redox Dark Surface (F7)   Sandy Muck Mineral (S1)   Redox Depressions (F8)   Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.   Secretary Surface (F7)   S	Black Histic (A3)  Hydrogen Sulfide (A4)  Stripped Matrix (S6)  Loamy Mucky Mineral (F1)  Stratified Layers (A5)  Loamy Gleyed Matrix (F2)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)	Dark Surface (S7) Iron Manganese Masses (F12) Very Shallow Dark Surface (TF12)
Stripped Matrix (SS)   Iron Manganese Masses (F12)   Iron Mangan	Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Redox Dark Surface (F6)	☐ Iron Manganese Masses (F12) ☐ Very Shallow Dark Surface (TF12)
Stratified Layers (AS)   Loamy Mucky Mincra (F1)   Very Shallow Dark Surface (TF12)   Depleted Below Dark Surface (A11)   Redox Dark Surface (F2)   Other (Explain in Remarks)	Stratified Layers (A5)  Loamy Gleyed Matrix (F2)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)
2 cm Muck (A10)	2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Redox Dark Surface (F6)	
Depleted Below Dark Surface (A11)   Redox Dark Surface (F6)   Thick Dark Surface (A12)   Sandy Muck Mineral (S1)   S cm Mucky Peat or Peat (S3)   Sturface (S3)   Sturface (S3)   Setrictive Layer (if observed):   Type:	Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Redox Dark Surface (F6)	Uther (Explain in Remarks)
Thick Dark Surface (A12) Sandy Muck Mineral (S1) Ser Mucky Peat or Peat (S3) Service Value (S4) Service Value (S5) Service Value (S5) Service Value (S6) Service Val	Thick Dark Surface (A12)	
Sandy Muck Mineral (S1)	Depleted Dark Surface (F7)	
Secondary Indicators (minimum of two required Surface Water (A1)    Variable Primary Indicators (minimum of two required Suturbod or groblematic.	Sandy Muck Minoral (S1)	
Setrictive Layer (if observed): Type:	Redox Depressions (F8)	wetland hydrology must be present,
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  ✓ Surface Water (A1)  ✓ High Water Table (A2)  ✓ Aquatic Fauna (B13)  ✓ Saturation (A3)  ☐ True Aquatic Plants (B14)  ☐ Water Marks (B1)  ☐ Hydrogen Sulfide Odor (C1)  ☐ Crayfish Burrows (C8)  ☐ Sediment Deposits (B2)  ☐ Drift Deposits (B3)  ☐ Presence of Reduced Iron (C4)  ☐ Inon Deposits (B5)  ☐ Inon Deposits (B5)  ☐ Inundation Visible on Aerial Imagery (B7)  ☐ Gauge or Well Data (D9)  ☐ Sparsely Vegetated Concave Surface (B8)  ☐ Other (Explain in Remarks)  Wetland Hydrology Present?  ☐ Yes ● No ☐ Depth (inches): ☐ Other (Explain finches): ☐ Other (Explain f	VDBOLOGY	
rimary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  Water-Stained Leaves (B9)  High Water Table (A2)  Aquatic Fauna (B13)  True Aquatic Plants (B14)  Water Marks (B1)  Sediment Deposits (B2)  Drinage Patterns (B10)  Sediment Deposits (B3)  Presence of Reduced Iron (C4)  Algal Mat or Crust (B4)  Ino Deposits (B5)  Indicators (minimum of two required (B6)  Secondary Indicators (minimum of two required (B6)  Drainage Patterns (B10)		
✓ Surface Water (A1)		Secondary Indicators (minimum of two required
✓ High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10)   ✓ Saturation (A3) True Aquatic Plants (B14) Dry Season Water Table (C2)   Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)   Sediment Deposits (B2) ✓ Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)   Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1)   Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) ✓ Geomorphic Position (D2)   Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5)   ✓ Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)   ✓ Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)    ### Wetland Hydrology Present? Yes No Depth (inches):		
✓ Saturation (A3)		
Water Marks (B1)		
Sediment Deposits (B2)  □ Oxidized Rhizospheres on Living Roots (C3) □ Drift Deposits (B3) □ Presence of Reduced Iron (C4) □ Algal Mat or Crust (B4) □ Recent Iron Reduction in Tilled Soils (C6) □ Iron Deposits (B5) □ Thin Muck Surface (C7) □ Inundation Visible on Aerial Imagery (B7) □ Sparsely Vegetated Concave Surface (B8) □ Other (Explain in Remarks)    Other (Explain in Remarks)   Outline Ou		
Algal Mat or Crust (B4)		
Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ FAC-Neutral Test (D5)  Inundation Visible on Aerial Imagery (B7) ☐ Gauge or Well Data (D9)  Sparsely Vegetated Concave Surface (B8) ☐ Other (Explain in Remarks)  Field Observations: Furface Water Present? Yes ○ No ○ Depth (inches): 72  Vater Table Present? Yes ○ No ○ Depth (inches): 0  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes ○ No ○ Depth (inches): 0  Wetland Hydrology Present? Yes ○ No ○ Depth (inches): 0  Thin Muck Surface (C7)  Gauge or Well Data (D9)  FAC-Neutral Test (D5)  FAC-Neutral Test (D5)  FAC-Neutral Test (D5)	☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)	Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6)	<b>✓</b> Geomorphic Position (D2)
Sparsely Vegetated Concave Surface (B8)	Iron Deposits (B5)	FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (inches): 72 Water Table Present? Yes No Depth (inches): 0 Water Table Present? Yes No Depth (inches): 0 Wetland Hydrology Present? Yes No Depth (inches): 0 Wetland Hydrology Present? Yes No No Depth (inches): 0 Wetland Hydrology Present? Yes No No Depth (inches): No Depth (inches): 0		
urface Water Present? Yes No Depth (inches): 72 /ater Table Present? Yes No Depth (inches): 0 maturation Present? Yes No Depth (inches): 0 meturation Present? Yes No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No Depth (inches): 0 meturation Present? Yes No No No No Depth (inches): 0 meturation Present? Yes No	Sparsely Vegetated Concave Surface (B8)  Other (Explain in Remarks)	
Vater Table Present? Yes No Depth (inches): 0 aturation Present? Yes No Depth (inches): 0 Metland Hydrology Present? Yes No No Depth (inches): 0  escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  A	ield Observations:	
Saturation Present? Includes capillary fringe)  Yes  No  Depth (inches):  Depth (inches):  Depth (inches):  O  Wetland Hydrology Present?  Yes  No  No  No  No  No  No  No  No  No  N	v	
Wetland Hydrology Present? Yes ( NO ( )	Water Table Present?  Yes  NO Depth (inches):	
Depth (Inches):   Pescribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  IA	We	etland Hydrology Present? Yes 💿 No 🔾
IA	includes capillary fringe)  Yes  No  Depth (inches):  U	
	escribe Recorded Data (stream gauge monitoring well aerial photos previous inspection	ns), if available:
	sociate recorded bata (orienti gauge, monitoring well, acrial priotos, previous inspection	

# **WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Anguin 138kV Extension No 4/Anguin-Brie 138 kV RO	Cit	y/County: Licking	Sampling Date: 22-Sep-22
Applicant/Owner: _AEP		S	tate: OH Sampling Point: UPL-MRK-001
Investigator(s): MRK, LMP	:	Section, Township, Ra	ange: S T 2N R 15W
Landform (hillslope, terrace, etc.): Hillside		Local rel	lief (concave, convex, none): convex
Slope: 2.0% / 1.1 ° Lat.: 40.05701		Long.: -82.746	.836 Datum: NAD83
Soil Map Unit Name: Cen1B1: Centerburg silt loam, 2 to 6 per	cent slopes	 i	NWI classification: NA
Are climatic/hydrologic conditions on the site typical for this time of ye		$\sim$	no, explain in Remarks.)
	nificantly dis	turbed? Ar	e "Normal Circumstances" present? Yes   No
Are Vegetation , Soil , or Hydrology na	turally proble	ematic?	f needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map show	, ,	•	, , ,
Hydrophytic Vegetation Present? Yes No •			· · · · · · · · · · · · · · · · · · ·
Hydric Soil Present?  Yes No   No		Is the Samp	
Wetland Hydrology Present? Yes ○ No ●		within a We	tland? Yes O No •
Remarks:			
	ena newly o	constructed industr	ial facility and active agricultural field. Area has been recently
<b>VEGETATION -</b> Use scientific names of plan	ts.	Dominant - Species?	
<u>Tree Stratum</u> (Plot size: 30' radius )	Absolute % Cover		
	98 COVEI	0.0%	Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)
2.	0	0.0%	That are obt., FACW, of FAC.
3.	0	0.0%	Total Number of Dominant Species Across All Strata: 1 (B)
4.	0	0.0%	Species Across All Strata: 1 (B)
5.	0	0.0% 0	Percent of dominant Species
	0	= Total Cover	That Are OBL, FACW, or FAC: 0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15' radius )			Prevalence Index worksheet:
1	0	0.0%	Total % Cover of: Multiply by:
2		0.0%	OBL species 0 x 1 = 0
3		0.0%	FACW species0 x 2 =0
4. 5.		0.0%	FAC species x 3 = 30
		= Total Cover	FACU species 100 x 4 = 400
Herb Stratum (Plot size: 5' radius )			UPL species <u>20</u> x 5 = <u>100</u>
1 Lolium perenne	100_	<b>✓</b> 76.9% FACU	Column Totals:130 (A)530 (B)
2. Zea mays	20	15.4% UPL	Prevalence Index = B/A = 4.077
3. Setaria pumila		7.7% FAC	Hydrophytic Vegetation Indicators:
4 5.		0.0%	1 - Rapid Test for Hydrophytic Vegetation
6.		0.0%	2 - Dominance Test is > 50%
7.	0	0.0%	$\Box$ 3 - Prevalence Index is ≤3.0 $^1$
8.	0	0.0%	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%	data in Remarks or on a separate sheet)
10.	0	0.0%	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woodv Vine Stratum (Plot size: 30' radius )	130	= Total Cover	$rac{1}{2}$ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%	
2.	0	0.0%	Hydrophytic Vegetation
	0	= Total Cover	Present? Yes No •
Remarks: (Include photo numbers here or on a separate sh Vegetation has been restored after approximately one grow active agricultural field planted with corn this season.	,	Erosion matting s	till visible under new grass growth. Data point is adjacent to an

SOIL Sampling Point: UPL-MRK-001

Profile Description: (Describe to the depth needed to document the indicator or confirm t	he absence of indicators.)
Depth Matrix Redox Features	ŕ
(inches) Color (moist) % Color (moist) % Type 1 Loc	<sup>2</sup> Texture Remarks
0-12 5Y 4/2 100	Silty Clay Loam
12-16 2.5Y 4/3 100	Silty Clay Loam
$^{1}$ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.	Location: PL=Pore Lining. M=Matrix.
Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1) Sandy Gleyed Matrix (S4)	_
Histic Epipedon (A2) Sandy Redox (S5)	Coast Prairie Redox (A16)
Black Histic (A3) Stripped Matrix (S6)	Dark Surface (S7)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1)	☐ Iron Manganese Masses (F12)
Stratified Layers (A5) Loamy Gleyed Matrix (F2)	☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10) Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)	
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Muck Mineral (S1) Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)	unless disturbed or problematic.
Restrictive Layer (if observed):	
Type:	-
Depth (inches):	Hydric Soil Present? Yes No •
Remarks:	•
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1) Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2) Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation (A3) True Aquatic Plants (B14)	Dry Season Water Table (C2)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C	Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)	FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Gauge or Well Data (D9)	
Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	
_	
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
	/etland Hydrology Present? Yes ○ No ●
Saturation Present? (includes capillary fringe) Yes No Depth (inches):	, , , , , , , , , , , , , , , , ,
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	ons), if available:
NA	•
Remarks:	
No source of hydrology was observed.	

### **WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Anguin 138kV Extension No 4/Anguin-Brie 138 kV R0	City	y/County:	Licking	Sampling Date: 22-Sep-22
Applicant/Owner: AEP		_	State:	OH Sampling Point: W-MRK-001 PEM
Investigator(s): MRK, LMP	-	ection, Town	ship, Range:	S T 2N R 15W
Landform (hillslope, terrace, etc.): Floodplain				concave, convex, none): concave
Slope: <u>2.0%</u> / <u>1.1</u> ° Lat.: 40.06141		Long.: -	82.754098	Datum: NAD83
Soil Map Unit Name: Pe: Pewamo silty clay loam, low carbona	ate till, 0 to 2	 2 percent sl	opes	NWI classification: NA
Are climatic/hydrologic conditions on the site typical for this time of year	ar? Yes	● No ○	(If no, ex	plain in Remarks.)
	gnificantly dist	urbed?	Are "No	ormal Circumstances" present? Yes   No
Are Vegetation  , Soil , or Hydrology	aturally probler	matic?	(If nee	ded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map show			•	, , ,
Hydrophytic Vegetation Present? Yes  No				
Hydric Soil Present? Yes   No			Sampled A	
Wetland Hydrology Present? Yes   No		Within	ra wedanc	** Yes © No C
Remarks:		<u> </u>		
This PEM wetland is located on the floodplain of an intermit construction to handle stormwater runoff for the facility.	tent waterco	ourse within	an industr	ial property. Area has been rececently graded by
<b>VEGETATION -</b> Use scientific names of plant	ts.	Dominant Species?		
		Rel.Strat.		Dominance Test worksheet:
	% Cover	Cover 0.0%	Status	Number of Dominant Species
1	0 [	0.0%		That are OBL, FACW, or FAC: (A)
3.	0 [	0.0%		Total Number of Dominant
4.	0 [	0.0%		Species Across All Strata: (B)
5.	0	0.0%		Percent of dominant Species
	0	= Total Cove	er	That Are OBL, FACW, or FAC: $100.0\%$ (A/B)
Sapling/Shrub Stratum (Plot size: 15' radius )				Prevalence Index worksheet:
1	0[	0.0%		Total % Cover of: Multiply by:
2	0[	0.0%		OBL species <u>60</u> x 1 = <u>60</u>
3		0.0%		FACW species <u>30</u> x 2 = <u>60</u>
4		0.0%		FAC species <u>5</u> x 3 = <u>15</u>
5		0.0%		FACU species <u>20</u> x 4 = <u>80</u>
Herb Stratum (Plot size: 5' radius )	0	= Total Cove	er	UPL species <u>0</u> x 5 = <u>0</u>
1 Leersia oryzoides	_60_	<b>✓</b> 52.2%	OBL	Column Totals: <u>115</u> (A) <u>215</u> (B)
2. Echinochloa crusgalli	20	17.4%	FACU	Prevalence Index = B/A = 1.870
3. Cyperus esculentus	20	17.4%	FACW	Hydrophytic Vegetation Indicators:
4. Persicaria pensylvanica	10		FACW	✓ 1 - Rapid Test for Hydrophytic Vegetation
5. Setaria pumila	_5	4.3%	FAC	✓ 2 - Dominance Test is > 50%
6. 7.	_0	0.0%		✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
8.	_0	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	□ <u>0.0%</u> □ 0.0%		data in Remarks or on a separate sheet)
10.	0 [			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
		= Total Cove	er	$\frac{1}{2}$ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	0 [	0.0%		
2.	0 [	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes ● No ○
Remarks: (Include photo numbers here or on a separate sh	eet.)			
Vegetation meets hydrophytic criteria.				

SOIL Sampling Point: W-MRK-001 PEM

301L								W-WILLY-OUT F LIVI
Profile Descr	iption: (Describe	to the depth ne	eded to document	the indic	ator or con	firm the	absence of indicators.)	
Depth	Matri	x	Red	ox Featu	res		_	
(inches)	Color (moist)	%	Color (moist)	%	Type 1	Loc2	Texture	Remarks
0-16	2.5Y 3/1	75	7.5YR 3/4	25	С	PL	Silty Clay Loam	
			-					
1 T C Co		tion DM Doduce	d Matrix, CS=Covered				Location: PL=Pore Lining. M	Matrix
		tion, RM=Reduce	ı Matrix, CS=Covered	J OF COALE	u Sanu Gran	5.	Location: PL=Pore Lining. N	=Mduix.
Hydric Soil I	ndicators:						Indicators for Problem	natic Hydric Soils <sup>3</sup> :
Histosol (A	<b>A1</b> )		Sandy Gleyed	Matrix (S4	)		Court Project Parker	(416)
Histic Epip	pedon (A2)		Sandy Redox (	S5)			Coast Prairie Redox	(A16)
☐ Black Hist	ic (A3)		Stripped Matrix	•			Dark Surface (S7)	
Hydrogen	Sulfide (A4)		Loamy Mucky	. ,	1)		Iron Manganese Mas	sses (F12)
	Layers (A5)		= ' '	•	,		Very Shallow Dark S	urface (TF12)
2 cm Muc	, , ,		Loamy Gleyed	•	<u>2)</u>		Other (Explain in Re	marks)
l —	` ,	(444)	Depleted Matri	x (F3)				narks)
l — '	Below Dark Surface	(AII)	✓ Redox Dark Su	ırface (F6)				
l —	k Surface (A12)		Depleted Dark	Surface (I	F7)		3 Indicators of hydroph	vtic vegetation and
Sandy Mu	ck Mineral (S1)		Redox Depress	sions (F8)			wetland hydrology	
5 cm Muc	ky Peat or Peat (S3)	)					unless disturbed	or problematic.
Restrictive La	ayer (if observed)	:						
Type:	., (							
· · -	`						Hydric Soil Present?	Yes ● No ○
Depth (incl	nes):						1 .,	
Remarks:								
l								
<b>HYDROLO</b>	GY							
-	rology Indicators							
_Primary Indica	tors (minimum of o	ne is required; che	eck all that apply)				Secondary Indicate	ors (minimum of two required)
Surface W	ater (A1)		☐ Water-Staine	d Leaves	(B9)		Surface Soil Cr	acks (B6)
✓ High Wate	er Table (A2)		Aquatic Faun	a (B13)			Drainage Patte	erns (B10)
✓ Saturation			True Aquatio		14)		Dry Season W	
				-	-			
Water Ma			☐ Hydrogen Su		` '		Crayfish Burro	
Sediment	Deposits (B2)		✓ Oxidized Rhi	zospheres	on Living Ro	ots (C3)	Saturation Visi	ble on Aerial Imagery (C9)
Drift Depo	sits (B3)		Presence of	Reduced I	ron (C4)		Stunted or Str	essed Plants (D1)
Algal Mat	or Crust (B4)		Recent Iron	Reduction	in Tilled Soil	s (C6)	✓ Geomorphic P	osition (D2)
☐ Iron Depo	sits (B5)		Thin Muck S	urface (C7	)		✓ FAC-Neutral T	est (D5)
	n Visible on Aerial Ir	magery (B7)	Gauge or We	-	-			
			_	-	-			
Sparsely \	egetated Concave !	Surrace (B8)	U Other (Expla	in in Rema	arks)			
Field Observa								
Surface Water	Present? Y	es 🔾 No 💿	Depth (incl	nes):				
		es   No		>				
Water Table Pi			Depth (incl	nes):	4	Mot	land Hydrology Present?	Yes   No
Saturation Pres		es 💿 No 🔾	Depth (incl	nes):	3	Wet	ianu nyurology Present:	165 C 110 C
(includes capill	ary minge)					nootie::	a) if available:	
	orueu Data (strea	ını gauge, moni	toring well, aerial	priotos, p	n evious ins	pections	s), ii avallable:	
NA								
Remarks:		·						
The source of	f hydrology is sto	rmwater draina	ge from several co	ilvert out	lets, nond	darinada	e, and seasonal flooding fr	om an intermittent watercourse.
Jource 0	, a. ology 15 3tt	acci ai aii la	50 0.11 3CVCI ali Cl		, pond	_aug	s, and seasonal hooding in	an intermitted to water course.

# **WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Anguin 138kV Extension No 4/Anguin-Brie 138 kV R0	City/	County: L	icking	Sampling Date: 22-Sep-22
Applicant/Owner: AEP			State:	OH Sampling Point: W-MRK-001 UPL
Investigator(s): MRK, LMP	Sec	ction, Townsh	hip, Range:	S T 2N R 15W
Landform (hillslope, terrace, etc.): Hillside		Lo	ocal relief (co	oncave, convex, none): convex
Slope: 5.0% / 2.9 ° Lat.: 40.061638			32.754330	Datum: NAD83
Soil Map Unit Name: Pe: Pewamo silty clay loam, low carbona	to till 0 to 2			NWI classification: NA
Are climatic/hydrologic conditions on the site typical for this time of year	_	No O		plain in Remarks.)
	nificantly distur		•	rmal Circumstances" present? Yes  No
	turally problem			- The constant of the constant
Are Vegetation, Soil, or Hydrology na SUMMARY OF FINDINGS - Attach site map show	, ,		,	ded, explain any answers in Remarks.)  ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No •		T		
Hydric Soil Present? Yes ○ No ●			Sampled A	
Wetland Hydrology Present? Yes No •		within	a Wetland	!? Yes ○ No •
Remarks:				
Upland data point collected for W-MRK-001. Upland data w	as collected i	n a maintai	ined lawn	within an industrial property.
<b>VEGETATION -</b> Use scientific names of plant	ts r	Dominant		
OSC SCIENCING NAMES OF PLANE		Species? -	T	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30' radius )	Absolute   % Cover	Rel.Strat. D	Indicator Status	
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC:
2	0	0.0%		Total Number of Dominant
3	_0	0.0%		Species Across All Strata:
4	_0 _	0.0%		Descent of descinant Charles
5				Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
_Sapling/Shrub Stratum (Plot size: 15' radius )		: Total Cover		
	0 [	0.0%		Prevalence Index worksheet:
2.	0 [	0.0%		Total % Cover of:
3.	0	0.0%		FACW species $0 \times 2 = 0$
4.	0	0.0%		FAC species $0 \times 3 = 0$
5.	0	0.0%		FACU species $0 \times 4 = 0$
Herb Stratum (Plot size: 5' radius )	=	Total Cover		UPL species $0 \times 5 = 0$
1,	0	0.0%		Column Totals:0(A)0(B)
2.	0	0.0%		Prevalence Index = B/A = 0.000
3.	0	0.0%		
4	0	0.0%		Hydrophytic Vegetation Indicators:
5	0	0.0%		1 - Rapid Test for Hydrophytic Vegetation     2 - Dominance Test is > 50%
6	_0	0.0%		3 - Prevalence Index is ≤ 3.0 ¹
7. 8.	0 _	0.0%		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.	0	0.0%		data in Remarks or on a separate sheet)
10.	0	0.0%		$oxedsymbol{\square}$ Problematic Hydrophytic Vegetation $^1$ (Explain)
		Total Cover		$rac{1}{2}$ Indicators of hydric soil and wetland hydrology must
Woodv Vine Stratum (Plot size: 30' radius )				be present, unless disturbed or problematic.
1,	_0 _			Hydrophytic
2		0.0%		Vegetation
	=	Total Cover		Present? Yes UNO U
Remarks: (Include photo numbers here or on a separate sh	eet )			
Vegetation does not meet hydrophytic criteria.	eet.)			
vegetation does not meet nydrophytic criteria.				

SOIL Sampling Point: W-MRK-001 UPL

Profile Description: (Describe to the depth needed	to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	,
	4	c <sup>2</sup> Texture Remarks
0-16 2.5Y 4/4 100		Silt Loam
$^{1}$ Type: C=Concentration, D=Depletion, RM=Reduced Ma	trix, CS=Covered or Coated Sand Grains.	Location: PL=Pore Lining. M=Matrix.
Hydric Soil Indicators:		Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Iron Manganese Masses (F12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10)	Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Muck Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)		unless disturbed or problematic.
Restrictive Layer (if observed):		
Туре:		_
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		•
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check a	ll that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation (A3)	True Aquatic Plants (B14)	Dry Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots	(C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (Co	6) Geomorphic Position (D2)
☐ Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (D9)	
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)	
Field Observations:		
Surface Water Present? Yes O No •	Depth (inches):	
0 0		
	Depth (inches):	Wetland Hydrology Present? Yes ○ No •
Saturation Present? (includes capillary fringe) Yes No •	Depth (inches):	
Describe Recorded Data (stream gauge, monitoring	ng well, aerial photos, previous inspec	tions), if available:
NA		•
Remarks:		
No source of hydrology was observed.		

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization						
Version 5.0	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001					

#### Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland may be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To properly answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information				
Name:	MRK, LMP			
Date:	9/22/2022			
Affiliation:	AECOM			
Address:	Foster Plaza 6, 681 Anderson Drive, Suite 120, Pittsburgh, PA 15220			
Phone Number:	814-516-1130			
e-mail address:	matthew.kline@aecom.com			
Name of Wetland:	W-MRK-001 PEM			
Vegetation Communit(ies):	РЕМ			
HGM Class(es):	Depressed			
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.				

# See Figures 1, 2, and 3 of Wetland Delineation and Stream Assessment Report.

Lat/Long or UTM Coordinate:	40.06141/-82.754098
USGS Quad Name:	New Albany
County:	Licking
Township:	2N
Section and Subsection:	15W
Hydrologic Unit Code:	HUC12 (050600011503) Headwaters Blacklick Creek
Site Visit:	9/22/2022
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	See Figure 2
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	W-MRK-001 PEM		
Wetland Size (delineated acres):	0.36	Wetland Size (Estimated total acres):	0.36

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



Comments, Narrative Discussion, Justification of Category Changes:

This PEM wetland is located on the floodplain of an intermittent watercourse within an industrial property. Area has been rececently graded by construction to handle stormwater runoff for the facility. The wetland hydrology is influenced by stormwater runoff, drainage from a pond upslope, and seasonal flooding from an intermittent watercourse.

Final score:	19	Category:	1

Wetland ID:	W-MRK-001 PEM
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# **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.	×	
		^	
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.

# **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</i> , <i>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

# Wetland ID: W-MRK-001 PEM

	<b>Mature forested wetlands</b> . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	*NO Go to Question 9a
9а	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

# Wetland ID: W-MRK-001 PEM

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		1	

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

Vetland ID: W-MRK-001 PEM		
ite: Anguin-Brie 138 kV Project Rater(s): MRK, LMP		Date: 9/22/2022
2.0 2.0 Metric 1. Wetland Area (size).	Field ID:	
Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha) (5 pts)  10 to <25 acres (4 to <10.1ha) (4 pts)  3 to <10 acres (1.2 to <4ha) (3 pts)  x  0.3 to <3 acres (0.12 to <1.2ha) (2pts)  0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)	Delineated acres: Total acres:	0.36
-<0.1 acres (0.04ha) (0 pts)  Metric 2. Upland buffers and surroun  2a. Calculate average buffer width. Select only one and  WIDE. Buffers average 25m to <50m (82 to <164ft) arou  NARROW. Buffers average 10m to <25m (32ft to <82ft) aro  VERY NARROW. Buffers average <10m (<32ft) around wet  2b. Intensity of surrounding land use. Select one or dou  VERY LOW. 2nd growth or older forest, prairie, savannah, v  LOW. Old field (>10 years), shrubland, young second growth	assign score. Do not double check.  the perimeter (7)  and wetland perimeter (4)  and wetland perimeter (1)  and perimeter (0)  able check and average.  wildlife area, etc. (7)  the forest. (5)	
MODERATELY HIGH. Residential, fenced pasture, park, co  x HIGH. Urban, industrial, open pasture, row cropping, mining  9.0 12.0 Metric 3. Hydrology.  3a. Sources of Water. Score all that apply.  High pH groundwater (5)  Other groundwater (3)  Precipitation (1)  x Seasonal/Intermittent surface water (3)  Perennial surface water (lake or stream) (5)  3c. Maximum water depth. Select one.  >0.7 (27.6in) (3)	3b. Connectivity. Score all (100 year floodplain (1) Between stream/lake and oth Part of wetland/upland (e.g. float of the part of riparian or upland con 3d. Duration inundation/sat Semi- to permanently inundat Regularly inundated/saturate	er human use (1) orest), complex (1) ridor (1) turation. Score one or dbl check. ted/saturated (4)
0.4 to 0.7m (15.7 to 27.5in) (2)  v0.4m (<15.7in) (1)  3e. Modifications to natural hydrologic regime. Score o  None or none apparent (12)  Recovered (7)  Recovering (3)  x Recent or no recovery (1)  4.0  16.0  Metric 4. Habitat Alteration and Devel	Check all disturbances obs  x ditch title dike weir x stormwater input	, , , ,
4a. Substrate disturbance. Score one or double check at None or none apparent (4) Recovered (3) Recovering (2) X Recent or no recovery (1) 4b. Habitat development. Select only one and assign so Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and at None or none apparent (9) Recovered (6) Recovering (3) X Recent or no recovery (1)	core.	ved  X shrub/sapling removal herbaceous/aquatic bed removal  X sedimentation dredging
16.0 subtotal this page ORAM v. 5.0 Field Form Quantitative Rating	woody debris removal toxic pollutants	farming x nutrient enrichment

 ${\it DRAFT\_ORAM~10~page\_W-MRK-001\_220922\_MRK.xlsx~|~Quantitative~Form}$ 

Wetla	nd ID:	W-MRK-001 PEM					
Site:	Anguin-Brie	138 kV Project	Rater(s):	MRK, LMF	)	Date:	9/22/2022
	rg =		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	,			
				Field	d ID:		
	16.0			W-MF	RK-001 PEM		
	subtotal this page						
0	16.0	Metric 5. Special We					
max 10 pts.	subtotal	Check all that apply and	d score as indicated.				
	<u> </u>	Bog (10) Fen (10)					
	-	Old growth forest (10)					
		Mature forested wetland (5)					
	<u> </u>	Lake Erie coastal/tributary wetla Lake Erie coastal/tributary wetla		))			
	<u> </u>	Lake Plain Sand Prairies (Oak					
		Relict Wet Praires (10)					
	<u> </u>	Known occurrence state/federa					
	<u> </u>	Significant migratory songbird/w Category 1 Wetland. See Ques					
	_		aon o quantanto riamig ( 10)				
3	3.0 19.0	Metric 6. Plant com	munities, intersper	sion, micr	otopography.		
max 20pts.	subtotal	6a. Wetland Vegetation	Communities.	Vege	tation Community	Cover Scale	
		Score all present using 0 to 3 se	cale.			2471 acres) contiguous area	
	<u> </u>	Aquatic bed Emergent			t and either comprises si tion and is of moderate q		
	<del>  '</del>	Shrub			ant part but is of low qua		
		Forest				ignificant part of wetland's 2	
		Mudflats				uality or comprises a small	
	<u> </u>	Open water Other			d is of high quality	ant part, or more, of wetland's 3	
	<u> </u>	6b. horizontal (plan view) Inte	erspersion.		tion and is of high quality		
		Select only one.	•	-			
	<u> </u>	High (5)			ve Description of Vege		
	-	Moderately high(4) Moderate (3)			op diversity and/or predor ance tolerant native spec	minance of nonnative or low	
		Moderately low (2)				onent of the vegetation, mod	
		Low (1)				rbance tolerant native spp	
	x	None (0)  6c. Coverage of invasive plan	ite Pofor		o be present, and specie ately high, but generallyw		
		Table 1 ORAM long form for list			ned or endangered spp t		
		or deduct points for coverage		A predo	ominance of native speci	es, with nonnative spp high	
	_	Extensive >75% cover (-5)				ve spp absent or virtually	
	-	Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)			, and nigh spp diversity a sence of rare, threatened	and often, but not always, d. or endangered spp	
		Nearly absent <5% cover (0)		[ p		-,g	
	х				t and Open Water Clas	s Quality	
		6d. Microtopography.  Score all present using 0 to 3 se	cale		<0.1ha (0.247 acres) 1 to <1ha (0.247 to 2.47 a	acres)	
	0	Vegetated hummucks/tussucks			ate 1 to <4ha (2.47 to 9.8		
	0	Coarse woody debris >15cm (6	in)		na (9.88 acres) or more		
		Standing dead >25cm (10in) db	h			_	
	1	Amphibian breeding pools		0 Absent	opography Cover Scale	•	
					t very small amounts or i	if more common	
				of marg	ginal quality		
	40.01			2 Presen	t in moderate amounts, b	out not of highest	
		OTAL (Max 100 pts)		quality	or in small amounts of hi	ghest quality	
	1 Ca	ategory		3 Presen	t in moderate or greater	amounts	
				and of	highest quality		

Wetland ID: W-MRK-001 PEM

# **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	
	Metric 3. Hydrology	9	9	
	Metric 4. Habitat		4	
	Metric 5. Special Wetland Communities	(	0	
	Metric 6. Plant communities, interspersion, microtopography		3	
	TOTAL SCORE	1	9	Category based on score breakpoints

 $Complete\ Wetland\ Categorization\ Worksheet.$ 

Wetland ID:	W-MRK-001 PEM

# 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?	Wetland was	*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	1



Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

# W-MRK-001

Date:

September 22, 2022

**Description:** 

PEM wetland

Category 1

Facing North



# W-MRK-001

Date:

September 22, 2022

**Description:** 

PEM wetland

Category 1

Facing East





Client Name:

**Site Location:** 

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

# W-MRK-001

Date:

September 22, 2022

**Description:** 

PEM wetland

Category 1

Facing South



# W-MRK-001

Date:

September 22, 2022

**Description:** 

PEM wetland

Category 1

Facing West





Client Name:Site Location:Project No.AEPAnguin-Brie 138kV Transmission Line Project60683729

# W-MRK-001

Date:

September 22, 2022

**Description:** 

PEM wetland

Category 1

Facing Soil



# APPENDIX B OEPA STREAM DATA FORMS / DELINEATED FEATURES PHOTOGRAPHS (STREAMS)



# ChieFPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION					
SITE NUM	BER RIV	/ER BASIN	DRAI	NAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft)	LAT	LONG RI	VER CODE	RIVER MILE	
DATE SCORER	COMMEN	TS			
NOTE: Complete All Items On Th	is Form - Refer to "Fie	d Evaluation Manual for	Ohio's PHWH	Streams" for Instru	ctions
STREAM CHANNEL NO MODIFICATIONS:	NE / NATURAL CHANNEL	☐ RECOVERED ☐ RE	COVERING 🗖 R	ECENT OR NO RECO	OVERY
1. SUBSTRATE (Estimate perce (Max of 32). Add total number of the control of the	f significant substrate types  PERCENT  TY  ots]  ots]  ctal  (A)	found (Max of 8). Final metrice  SILT [3 pt] LEAF PACK/WOOD FINE DETRITUS [3 CLAY or HARDPAN MUCK [0 pts] ARTIFICIAL [3 pts]  Substrate Percentage Check	c score is sum of l Y DEBRIS [3 pts] pts]	PERCENT  PERCENT  (B)	HHEI Metric Points Substrate Max = 40
2. Maximum Pool Depth (Measure valuation. Avoid plunge pools  > 30 centimeters [20 pts]  > 22.5 - 30 cm [30 pts]  > 10 - 22.5 cm [25 pts]  COMMENTS	from road culverts or storm	water pipes) (Check ONL)  > 5 cm - 10 cm [15  < 5 cm [5 pts]  NO WATER OR M	one box): pts] OIST CHANNEL [(		Pool Depth Max = 30
3. BANK FULL WIDTH (Measure > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [2	pts]	easurements) (Chec 	3' 3" - 4' 8") [15 pts]	<u>'</u> ):	Bankfull Width Max=30
COMMENTS		AVERAGE B	BANKFULL WIDTH	f (Feet):	
RIPARIAN ZONE AND RIPARIAN WIDTH  L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	FLOODPLAIN QUALITY  FLOODPLAIN ( L R (Most  Mature)  Mature  Imma Field		d Right (R) as look  □ □ □ Co	ing downstream分 onservation Tillage rban or Industrial pen Pasture, Row Crop	
None COMMENTS Mining or Construction  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)  Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)					
	1.0 1.5 E	channel) (Check <i>ONLY</i> one   2.0   2.5		3.0 >3	o ffi

ADDITIONAL STREAM INFORMATION (This Information Must Also	be Completed):
QHEI PERFORMED? - Tyes No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	
CWH Name:	
☐ EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE EN	TIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Towns	hip / City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):	
Were samples collected for water chemistry? (Y/N): (Note lab	sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (μmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not,	please explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
,	collections optional. NOTE: all voucher samples must be labeled with the sit sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Of Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquat Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for	site evaluation and a narrative description of the stream's location
S-MRK- QOI PER  N  N  N  N  N  Culvart  Culvart	Culverts  ~ field ~



**Stream Photographs** 

Client Name:

**Site Location:** 

Project No.

**AEP** 

Anguin-Brie 138kV Transmission Line Project

60683729

#### S-MRK-001

Date:

September 22, 2022

**Description:** 

Intermittent

UNT to Blacklick Creek

Class 1 PHW

Facing Upstream



# S-MRK-001

Date:

September 22, 2022

**Description:** 

Intermittent

UNT to Blacklick Creek

Class 1 PHW

Facing Downstream





**Stream Photographs** 

Client Name: Site Location:

Anguin-Brie 138kV Transmission Line Project

**Project No.** 60683729

Date:

AEP

September 22, 2022

**Description:** 

Intermittent

UNT to Blacklick

Creek

Class 1 PHW

Substrate



# **APPENDIX C**

**UPLAND DRAINAGE FEATURES PHOTOGRAPHIC RECORD** 



**Upland Drainage Feature Photograph Record** 

**Client Name:** 

AEP

**Site Location:** 

Anguin-Brie 138kV Transmission Line Project

**Project No.** 60683729

# **UDF** #1

Date:

September 22, 2022

**Description:** 

UDF-MRK-001

Facing North



# **UDF #1**

Date:

September 22, 2022

**Description:** 

UDF-MRK-001

Facing East





**Upland Drainage Feature Photograph** Record

**Client Name:** 

**Site Location:** 

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

# **UDF #1**

Date:

September 22, 2022

**Description:** 

UDF-MRK-001

Facing South



# **UDF #1**

Date:

September 22, 2022 **Description:** 

P-MRK-001

Facing West



# **APPENDIX D**

**POND PHOTOGRAPHS** 



**Pond & Habitat Photograph Record** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

# Pond #1

Date:

September 22, 2022

**Description:** 

P-MRK-001

Facing North



# Pond #1

Date:

September 22, 2022

**Description:** 

P-MRK-001

Facing East





**Pond & Habitat Photograph Record** 

Client Name:

Site Location:

Project No.

AEP

Anguin-Brie 138kV Transmission Line Project

60683729

Pond #1

Date:

September 22, 2022

**Description:** 

P-MRK-001

Facing South



Pond #1

Date:

September 22, 2022

**Description:** 

P-MRK-001

Facing West





**Pond & Habitat Photograph Record** 

Client Name:Site Location:Project No.AEPAnguin-Brie 138kV Transmission Line Project60683729

**Pond #1** 

Date:

September 22, 2022

**Description:** 

P-MRK-001

Facing Soil Profile

