# Construction Notice for the Beacon-Darby 345 kV Tie Lines Adjustment Project



PUCO Case No. 24-1036-EL-BNR

Submitted to:

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

Submitted by: Ohio Power Company

November 19, 2024

# Construction Notice

### **Ohio Power Company**

### Beacon-Darby 345 kV Tie Lines Adjustment

### 4906-6-05 Accelerated Application Requirements

Ohio Power Company (the "Company") provides the following information to the Ohio Power Siting Board ("OPSB") pursuant to Ohio Administrative Code Section 4906-6-05.

### 4906-6-5(B) General Informatio4906-6-05(B) General Information

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

Provide 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 or construction notice application.

The Company has identified the need to construct the Beacon-Darby 345 kV Tie Lines Adjustment Project (the "Project") in the City of Hilliard, Franklin County, Ohio. The purpose of the Project is to provide 138 kV service to a customer's non-jurisdictional stepdown station by extending three 345 kV transmission lines less than 0.1 mile each to the north from Beacon Station (OPSB Case Number 23-0691-EL-BLN - approved on September 20, 2023) to the customer's Darby Station. The Project was originally approved as part of the Hayden-Roberts 345 kV Cut-in (Beacon Station) and Beacon-Darby 345 kV Tie Lines Letter of Notification (OPSB Case Number 23-1050-EL-BLN – approved on February 15, 2024) but is being resubmitted due to shifts within the customer's station, which in turn shifted the approved tie line centerlines by less than 30 feet. The location of the customer's property, transmission line alignments, and substations (collectively the "Project Area") are shown on **Figure 1** and **Figure 2** in **Appendix A**.

The Project meets the requirements for a CN because it is within the types of projects defined by item (1)(d)(i) 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 attract or meet the requirements of a specific customer or customers, as follows:
    - i. The line is completely on the property owned by the specific customer or the applicant.

The Project has been assigned PUCO Case No. 24-1036-EL-BNR.

### **B(2)** Statement of Need

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

A customer has requested a new station to serve their facility requiring 125 MW of initial load, with growth up to 328 MW of peak demand. To meet the customer's needs, the Company will be required to construct a new 345 kV station, configured in a breaker-and-half layout, named Beacon Station. The addition of Beacon Station also benefits existing customers because it is part of the transmission through-path. Adding breakers at Beacon Station will reduce the exposure of potential outages caused by the Hayden - Roberts No. 2 345 kV circuit. Beacon Station will require cutting into the existing Hayden - Roberts 345 kV circuit #2 (part of Hayden - Roberts 345 kV double-circuit Transmission Line). From the cut-in, two single circuit 345 kV transmission lines will be interconnected at Beacon Station. Also, to accommodate the cut-in, a 345 kV structure will be installed to raise the Hayden - Roberts 345 kV circuit #1. The transmission line improvements are the subject of this application. The customer has requested an in-service date of June 1, 2024, 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 Hilliard area (potentially 328 MW peak).

The need was presented and reviewed with stakeholders at the February 18, 2022, PJM SSRTEP Western Meeting. The solution was presented and reviewed at the May 9, 2023, PJM TEAC Meeting. The Project has been assigned PJM supplemental number s3441.2. The Project was included in the Company's 2024 Long Term Forecast Report (LTFR) on page 124 (See **Appendix B**).

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

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 transmission lines and substation is shown in **Figure** 1 of **Appendix A**.

### **B(4)** Alternatives Considered

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

The Project is located on customer and Company property within an overall customer development. The proposed locations of tie lines are based on the station bays and are the only suitable alignments for the Project. The proposed Project will result in no impacts to wetlands, streams, or known cultural resource areas eligible for the National Register of Historic Places (NRHP). Therefore, this alternative represents the most suitable location and is the most appropriate solution for meeting the Company and specific customer's needs in the area.

### **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 Project will be located entirely within properties owned by the Company or customer, with no additional property owners or tenants affected. The Company maintains a website (<a href="http://aeptransmission.com/ohio/">http://aeptransmission.com/ohio/</a>) on which an electronic copy of this CN is available. An electronic copy of the CN will be served to the public library in each political subdivision affected by this Project.

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

### Provide an anticipated construction schedule and proposed in-service date of the project.

Construction of the Project is planned to begin in November 2024, and the anticipated in-service date will be December 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** in **Appendix A** identifies the location of the Project area on a United States Geological Survey 1:24,000 quadrangle map of the Hilliard, Ohio and Northwest Columbus, Ohio quadrangles. Figure 2 in Appendix A displays the Project components on a 2022 aerial photograph.

### **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 **Table 1**, below.

**Table 1 – Property Agreements** 

Property Parcel Number	Agreement Type	Easement/ Option Obtained (Yes/No)
050-011984 (Company Property)	Not Applicable	Not Applicable
050-002806 (Customer Property)	New Easement	Yes

### **B(9)** Technical Features

Describe the following information regarding the technical features of the project:

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

The transmission line is estimated to include the following:

Asset: Beacon-Darby Tie Line #1

Voltage: 345 kV

Conductors: 2-bundle 795 kcm 26/7 ACSR Drake

Static Wire: (1) 7#8 Alumoweld

Insulators: Polymer ROW Width: 150 feet

Structure Type: Not Applicable

Asset: Beacon-Darby Tie Line #2

Voltage: 345 kV

Conductors: 2-bundle 795 kcm 26/7 ACSR Drake

Static Wire: (1) 7#8 Alumoweld

Insulators: Polymer ROW Width: 150 feet

Structure Type: Not Applicable

Asset: Beacon-Darby Tie Line #3

Voltage: 345 kV

Conductors: 2-bundle 795 kcm 26/7 ACSR Drake

Static Wire: (1) 7#8 Alumoweld

Insulators: Polymer ROW Width: 150 feet

Structure Type: Not Applicable

### 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 cost estimate for the Proposed Project is approximately \$420,000 using a Class 4 estimate. Forty percent of the costs will be recovered through reimbursement from the customer. The remaining 60%

### Construction Notice for the Beacon-Darby 345 kV Tie Lines Adjustment Project

of the costs will be recovered through the Ohio Power Company's FERC formula rate (Attachment H-14 to the PJM OATT) and allocated to the AEP Zone pursuant to the PJM OATT.

### **B(10) Social and Ecological Impacts**

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

### B(10)(a) Land Use

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** in **Appendix A**. The Project is located in the City of Hilliard, Franklin County, Ohio. Land use in the Project Area is industrial with scattered residences. Interstate 270 is adjacent to the customer property to the east. The Project area is zoned M1-Restricted Industrial.

### B(10)(b) Agricultural Land

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 majority of the customer property, including the entirety of the Project is currently being developed for industrial use. No agricultural land or easements are affected by the Project. On November 4, 2024, the Franklin County Auditor indicated that the Project properties are not identified as Agricultural District Land parcels.

### B(10)(c) Archaeological and Cultural Resources

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

The Company's consultant completed a Phase I Cultural Resource Management Investigation of the Project Area. No further investigation was considered to be necessary by the consultant. The Ohio Historic Preservation Office ("SHPO") agreed that the Project will not impact any cultural resources eligible for listing on the NRHP and no additional coordination is necessary prior to construction. A copy of the April 21, 2023 concurrence letter from SHPO is provided in **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 was filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHCooooo6 for the Beacon Station and Hayden-Roberts 345 kV Cut-in areas of disturbance that includes the Project. The Company also coordinated storm water permitting needs with the City of Hilliard as required. The Company implemented and maintained best management practices as outlined in the Storm Water Pollution Prevention Plan ("SWPPP") to minimize erosion control sediment to protect surface water quality during storm events. Beacon Station and the customer's station have been constructed. No additional ground disturbance is necessary to construct the Project.

Wetland and stream delineation field surveys were completed within the Project area by the Company's consultant in July 2022, April 2023, and May 2023. While multiple features were delineated on the overall survey area beyond the Project work areas, the Company does not anticipate impacting any delineated wetlands or streams (see Figure 2 in Appendix D). No further disturbance is necessary as both Beacon Station and the customer's distribution station have been constructed. Therefore, the Project will not require a Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers or a Section 401 Water Quality Certification from the OEPA.

The FEMA Flood Insurance Rate Map was reviewed to identify any floodplains/flood hazard areas that have been mapped within the Project Area (specifically, map number **39049C0163K**). Based on this mapping, no mapped FEMA floodplains are located in the Project Area. Therefore, no floodplain permit will be required for this 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.

As part of the ecological study completed for the Project, a coordination letter was submitted to the USFWS Ohio Ecological Services Field Office seeking technical assistance on the Project for potential impacts to threatened or endangered species. The July 11, 2022 response letter from the USFWS (see **Appendix C**) indicated all projects in the State of Ohio lie within the range of the federally endangered Indiana bat and northern long-eared bat. In Ohio, presence of these species is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document probable absence. The USFWS response letter states that, should the Project site contain trees ≥3 inches diameter

### Construction Notice for the Beacon-Darby 345 kV Tie Lines Adjustment Project

at breast height (dbh), the trees be saved whenever possible. If any caves or abandoned mines may be disturbed, further coordination is requested. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, the USFWS recommends that removal of trees ≥3 inches dbh only occur between October 1 and March 31 in order to avoid adverse effects to these species. If implementation of seasonal tree clearing is not possible, the USFWS recommends summer presence/absence surveys be conducted between June 1 and August 15. Based on current USFWS Ohio Field Office guidance, a desktop evaluation of potential hibernaculum was conducted in the Project area. No hibernaculum or caves were located in the Project area based on the site reconnaissance and review of documented mines and karst features. Additionally, no tree clearing is anticipated for the Project. Therefore, no impacts were anticipated for the Indiana bat, northern long-eared bat, or tricolored bat.

Due to the Project type, size, and location, USFWS does not anticipate adverse effects to any federally endangered, threatened, proposed, or candidate species.

A coordination letter was submitted to the Ohio Department of Natural Resources ("ODNR") Division of Wildlife ("DOW") Ohio Natural Heritage Program ("ONHP") and the ODNR - Office of Real Estate seeking an environmental review of the proposed Project for potential impacts on state-listed and federally-listed threatened or endangered species. Correspondence from ODNR's DOW/OHNP and the ODNR - Office of Real Estate was received on July 18, 2022 (see Appendix C).

According to the ODNR-DOW, the Project is within the range of the Indiana bat, northern long-eared bat, little brown bat, and tricolored bat. ODNR recommends cutting between October 1 and March 31. Based on a desktop survey for caves, mines, and other potential openings, no winter hibernacula were identified within 0.25 mile of the Project (See Appendix D). No tree clearing is anticipated as part of the Project. Therefore, no additional coordination with ODNR regarding bat species is required.

The ODNR-DOW indicated that the Project is within the range of 13 mussel species and nine fish species. Due to no in-water work within a perennial stream and no habitat identified, these species are not anticipated to be impacted by the Project.

In addition, the ODNR lists the Project in the range of the American bittern, black-crowned night-heron, lark sparrow, least bittern, northern harrier, sandhill crane, and upland sandpiper. The ODNR recommends that nesting habitats for the listed species be avoided during their nesting periods. Professional surveys completed for avian resources concluded no suitable habitat was observed for any of the species in the Project area. Therefore, no impacts to these bird species are anticipated.

### 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.

Correspondence received from the USFWS indicated that there are no federal wilderness areas, wildlife refuges, or designated critical habitat in the Project vicinity. Similarly, the ODNR ONHP identified no unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state Ohio Power Company

Beacon-Darby 345 kV Tie Lines Adjustment Project

### Construction Notice for the Beacon-Darby 345 kV Tie Lines Adjustment Project

nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within one mile of the Project (see **Appendix D**).

FEMA Flood Insurance Rate Maps were consulted to identify any floodplains/flood hazard areas that have been mapped in the Project Area (specifically, map number **39049C0163K**). Based on these maps, no mapped FEMA floodplains are located in the Project area.

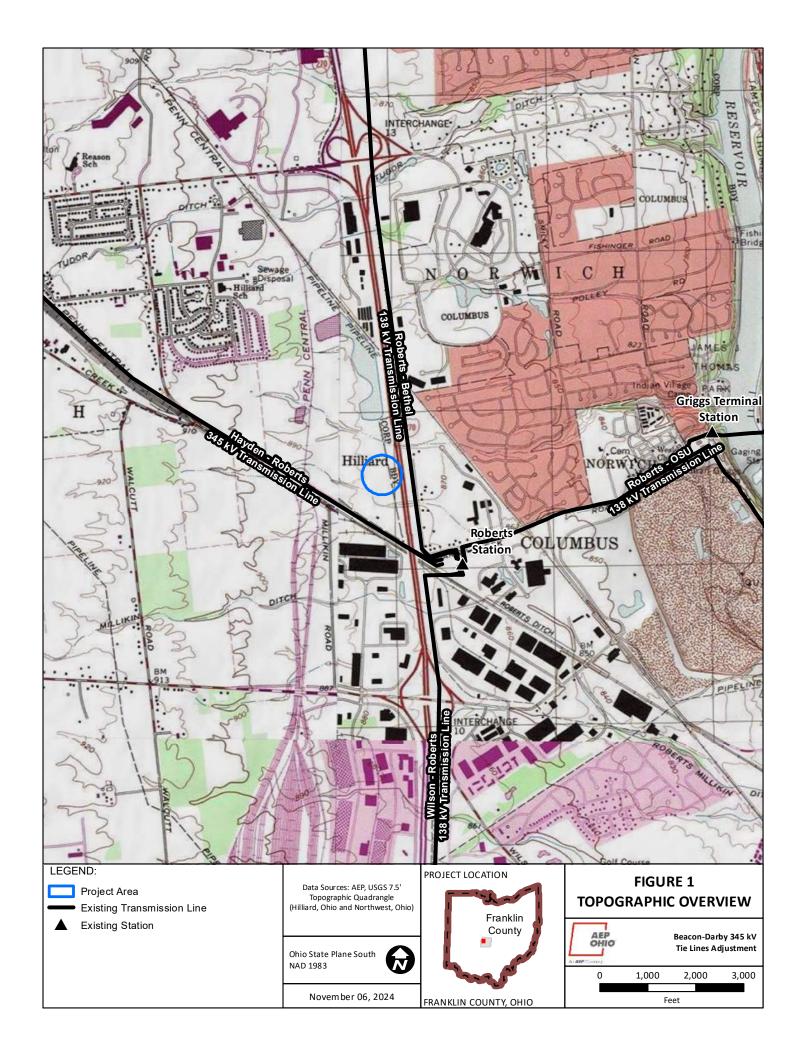
Wetland and stream delineation field surveys were completed within the Project area by the Company's consultant in July 2022, April 2023, and May 2023. While multiple features were delineated on the overall survey area beyond the Project work areas, the Company does not anticipate impacting any delineated wetlands or streams (see **Figure 2** in **Appendix D**), as both stations connected by the Project have been constructed.

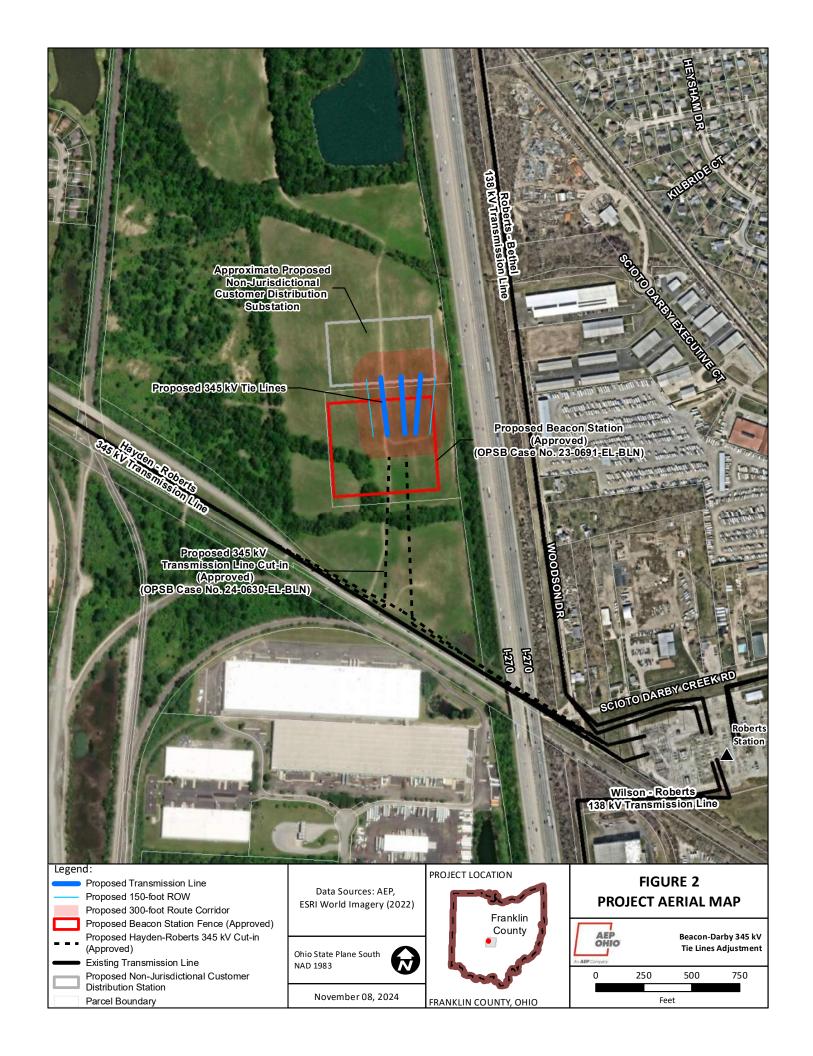
### B(10)(g) Unusual Conditions

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 Maps**





Appendix B Long Term Forecast Report and PJM Solution

PUCO Form FE-T9:

		Specifications of Planned Electric Transmission Lines
١	CONSEQUENCES OF LINE CONSTRUCTION	Unable to provide requested service to customer
	DEFERMENT OR TERMINATION MISCELLANEOUS:	
	LINE NAME AND NUMBER:	Beacon - Darby 345 kV #1 (TP2022004)
<b>—</b>	ENTE NAME AND NOMBER.	, , ,
2	POINTS OF ORIGIN AND TERMINATION	Beacon - Darby INTERMEDIATE STATIONS - N/A
	RIGHTS-OF-WAY: LENGTH / WIDTH /	~0.06 mi / 150 ft / 1 circuit
	CIRCUITS	
	VOLTAGE: DESIGN / OPERATE	345 kV / 345 kV
	APPLICATION FOR CERTIFICATE:  CONSTRUCTION:	2024
	CAPITAL INVESTMENT:	2024 \$0.1 M
	PLANNED SUBSTATION:	Beacon
	SUPPORTING STRUCTURES:	Steel
		N/A
10	PARTICIPATION WITH OTHER UTILITIES	IVA
١.,	PURPOSE OF THE PLANNED	New 345 kV extension to serve customer
11	TRANSMISSION LINE	
	CONSEQUENCES OF LINE CONSTRUCTION	Unable to provide requested service to customer
12	DEFERMENT OR TERMINATION	Shabis to provide requested estribe to editionic
	MISCELLANEOUS:	
1	LINE NAME AND NUMBER:	Beacon - Darby 345 kV #2 (TP2022004)
		Beacon - Darby INTERMEDIATE STATIONS - N/A
2	POINTS OF ORIGIN AND TERMINATION	,
,	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	~0.06 mi / 150 ft / 1 circuit
	VOLTAGE: DESIGN / OPERATE	345 kV / 345 kV
	APPLICATION FOR CERTIFICATE:	2024
	CONSTRUCTION:	2024
7	CAPITAL INVESTMENT:	\$0.1 M
	PLANNED SUBSTATION:	Beacon
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
10	PURPOSE OF THE PLANNED	
11	TRANSMISSION LINE	New 345 kV extension to serve customer
	CONSEQUENCES OF LINE CONSTRUCTION	Unable to provide requested service to customer
	DEFERMENT OR TERMINATION	
	MISCELLANEOUS: LINE NAME AND NUMBER:	Beacon - Darby 345 kV #3 (TP2022004)
<b>—</b>	EINE NAME AND NOMBER.	
2	POINTS OF ORIGIN AND TERMINATION	Beacon - Darby INTERMEDIATE STATIONS - N/A
	RIGHTS-OF-WAY: LENGTH / WIDTH /	~0.06 mi / 150 ft / 1 circuit
	CIRCUITS	
	VOLTAGE: DESIGN / OPERATE	345 kV / 345 kV
	APPLICATION FOR CERTIFICATE:	2024
	CONSTRUCTION: CAPITAL INVESTMENT:	2024 \$0.1 M
	PLANNED SUBSTATION:	Beacon
	SUPPORTING STRUCTURES:	Steel
		N/A
10	PARTICIPATION WITH OTHER UTILITIES	1.0/. 1
	PURPOSE OF THE PLANNED	New 345 kV extension to serve customer
11	TRANSMISSION LINE	
	CONSEQUENCES OF LINE CONSTRUCTION	Unable to provide requested service to customer
12	DEFERMENT OR TERMINATION	Shabis to provide requested corride to eduterine
	MISCELLANEOUS:	
1	LINE NAME AND NUMBER:	Green Chapel - Tasjan 138 kV (TP2023025)
_	DOINTS OF ODICIN AND TERMINATION	Green Chapel - Tasjan INTERMEDIATE STATIONS - N/A
2	POINTS OF ORIGIN AND TERMINATION RIGHTS-OF-WAY: LENGTH / WIDTH /	
3	CIRCUITS	~2.75 mi / 100 ft / 2 circuit (~0.72 line work)
	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
	APPLICATION FOR CERTIFICATE:	2024
	CONSTRUCTION:	2026
	CAPITAL INVESTMENT:	\$2.23 M
	PLANNED SUBSTATION:	Tasjan
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
	PURPOSE OF THE PLANNED	Tie new station into Cross Const. In resetting 400 IA/III-
_11	TRANSMISSION LINE	Tie new station into Green Capel - Innovation 138 kV line





Need Number: AEP-2022-OH024

Process Stage: Solutions Meeting 5/9/2023

Previously Presented: Need Meeting 2/18/2022

Project Driver: Customer Service Specific Assumption Reference:

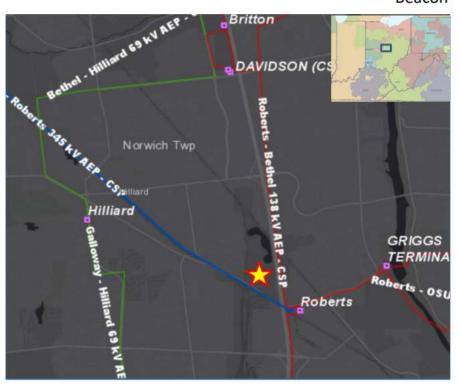
AEP Connection Requirements for the AEP Transmission System (AEP Assumptions Slide 12)

#### **Problem Statement:**

Customer Service:

 A customer has requested transmission service at a site North of AEP's existing Roberts station in Columbus, OH.

- The customer has indicated an initial peak demand of 90 125 MW with an ultimate capacity of up to 360 328 MW at the site.
- Initial customer requested in-service date of June 1, 2024.





# AEP Transmission Zone M-3 Process Dublin & Hilliard, OH

Need Number: AEP-2022-OH024

Process Stage: Solutions Meeting 5/9/2023

**Proposed Solution:** 

The following scope of work is all direct connect facilities to physically connect demand to the grid.

Beacon 345 kV: Construct a greenfield station with (8) 5000 A, 345 kV, 63 kA circuit breakers & & (1) 158.4 MVAR 345 kV Cap bank in a breaker and a half configuration. Cut into the 345 kV Hayden – Roberts No. 2 circuit with two single circuit 345 kV lines ~0.2 miles terminating into Beacon station; utilizing 2-bundle ACSR Rail 954 (45/7) conductor SE 1887 MVA. A structure will need be installed to raise the Hayden – Roberts No 1 circuit. Construct three single circuit lines ~0.1 miles, between Beacon and the customer; utilizing 2-bundle ACSR Drake 795 (26/7) conductor SE 1800 MVA. Cost: \$40.0 M

# **Appendix C Agency Coordination**



In reply, refer to 2022-FRA-55404

April 21, 2023

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

RE: Beacon Station Project, Norwich Township, Franklin County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received April 12, 2023 regarding the proposed Beacon Station Project, Norwich Township, Franklin 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 Addendum Archaeological Investigations for the Beacon Station Project in Franklin County, Ohio by Ryan J. Weller (Weller & Associates, Inc. 2023).

A literature review and visual inspection was completed as part of the investigations. Three (3) previously identified archaeological sites are located within the project area, Ohio Archaeological Inventory (OAI) #33FR3511-33FR3513. The archaeological sites were previously determined not eligible for listing in the National Register of Historic Places (NRHP). Only a minor change in the project area is proposed within disturbed right-of-way and no additional archaeological sites were identified during survey. Our office agrees no additional archaeological investigation is needed. No additional historic properties or architecture resources 50 years of age or older were identified.

Based on the information provided, we continue to agree that the project as proposed will have no effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional historic properties are discovered during implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me at (614) 298-2022, or by e-mail at <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: 1097773



# 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

July 18, 2022

Matthew Teitt Stantec 1500 Lake Shore Drive Suite 100 Columbus, OH 43204

Re: 22-0635; AEP Beacon Station and Hayden-Roberts Line Extension Project

**Project:** The proposed project involves the extension of the existing Hayden-Roberts 345 kV Line and the new installation of Beacon Station.

**Location:** The proposed project is located in Norwich Township, Franklin County, Ohio.

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

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

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

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

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

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the

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

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "Range-wide Indiana Bat 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 following listed mussel species.

### Federally Endangered

clubshell (*Pleurobema clava*)
rayed bean (*Villosa fabalis*)
northern riffleshell (*Epioblasma torulosa rangiana*)
snuffbox (*Epioblasma triquetra*)
purple cat's paw (*Epioblasma o. obliquata*)

### Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

### State Endangered

elephant-ear (*Elliptio crassidens crassidens*) pocketbook (*Lampsilis ovata*)

long solid (Fusconaia maculata maculate)

washboard (Megalonaias nervosa)

Ohio pigtoe (*Pleurobema cordatum*)

#### State Threatened

pondhorn (*Uniomerus tetralasmus*)

Salamander Mussel (Simpsonaias ambigua)

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.

The project is within the range of the following listed fish species.

State Endangered

goldeye (*Hiodon alosoides*) shortnose gar (*Lepisosteus platostomus*) Iowa darter (*Etheostoma exile*) spotted darter (*Etheostoma maculatum*) northern brook lamprey (*Ichthyomyzon fossor*) tonguetied minnow (*Exoglossum laurae*) popeye shiner (*Notropis ariommus*)

### State Threatened

lake chubsucker (Erimyzon sucetta) paddlefish (Polyodon spathula)

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 these or other aquatic species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. 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, the project is not likely to impact this species.

The project is within the range of the black-crowned night-heron (*Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round. Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. 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 lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 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 least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open 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 sandhill crane (*Grus canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through august 31. If this habitat will not be impacted, this project is not likely to have an impact on 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 <u>local floodplain administrator</u> should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at <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 From: Ohio, FW3
To: Teitt, Matthew

Cc: nathan.reardon@dnr.state.oh.us; Wyza, Eileen

Subject: AEP Beacon Station and Hayden-Roberts 345 kV Line Extension Project, Franklin County, Ohio

**Date:** Monday, July 11, 2022 6:36:06 PM

Attachments: <u>image.png</u>

image.png



Project Code: 2022-0054381

Dear Mr. Teitt,

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

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

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see <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 (<a href="https://epa.ohio.gov/portals/47/facts/ohio\_wetlands.pdf">https://epa.ohio.gov/portals/47/facts/ohio\_wetlands.pdf</a>). 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>.



Patrice Ashfield Field Office Supervisor

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

# **Appendix D Ecological Survey Report**



# Beacon Station Project, Franklin County, Ohio

# **Ecological Survey Report**

### Prepared for:

AEP Ohio Transmission Company, Inc. 8600 Smiths Mill Road New Albany, OH 43054

### Prepared by:

Stantec Consulting Services Inc. 10200 Alliance Road, Suite 300 Cincinnati, OH 45242

This document entitled Beacon Station Project Ecological Survey Report was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of AEP Ohio Transmission Company, Inc. (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by (signature)

### **Matt Denzler**

Reviewed by Kutha

(signature)

**Kate Bomar** 

Reviewed by Daniel J. Godec

**Dan Godec** 

# **Table of Contents**

1.0	INTRODUCTION	1
2.0	METHODS	
2.1	WETLAND DELINEATION	
2.2	STREAM DELINEATION	
2.3	RARE SPECIES	2
3.0	RESULTS	
3.1	TERRESTRIAL HABITAT	
3.2	WETLANDS	
3.3	STREAMS	
3.4	OPEN WATERS	
3.5	RARE, THREATENED, OR ENDANGERED SPECIES HABITAT	10
4.0	CONCLUSIONS AND RECOMMENDATIONS	18
5.0	REFERENCES	21
LIST O	F TABLES	
Table	Vegetation Communities and Land Cover Found within the Beacon	
	Station Project Area, Franklin County, Ohio	3
Table	2. Summary of Wetland Resources Found within the Beacon Station Project	
	Area, Franklin County, Ohio	6
Table	3. Summary of NWI Disposition within the Beacon Station Project Area,	7
Tabla	Franklin County, Ohio	/
IUDIE	Area, Franklin County, Ohio	9
Table	5. Summary of Potential Federally Listed and Ohio State-Listed Species	/
	within the Beacon Station Project Area, Franklin County, Ohio	10
LICT		
LISI O	F APPENDICES	
APPEN	IDIX A WETLAND AND STREAM IMPACT TABLES	A.1
APPEN	IDIX B FIGURES	B.1
	t Location Map	
	nd and Waterbody Delineation Map	
Habita	at Assessment Map	B.3
rat Hil	bernacula Desktop Study Map	B.4
	IDIX C DATA FORMS	
	nd Determination Data Forms	
$\bigcirc$ RA $\wedge$	1 Data Forms	C.3

APPENDIX E	AGENCY CORRESPONDENCE	E.1			
	graphs				
Wetland and \	Waterbody Photographs	D.1			
APPENDIX D	REPRESENTATIVE PHOTOGRAPHS	D.1			
HHEI/QHEI Dat	HHEI/QHEI Data Forms				

Introduction May 12, 2023

## 1.0 INTRODUCTION

AEP Ohio Transmission Company, Inc. (AEP) is proposing to construct a new 138 kV (kilovolt) substation (Beacon Station) (the Project), in Hilliard, Franklin County, Ohio (Figure 1, Appendix B). An approximate 46-acre study area for the proposed 138 kV station was surveyed for wetlands, waterbodies, open water features, upland drainage features, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) biologists on July 13 and 20, 2022 and April 12 and May 2, 2023 (Figure 2, Appendix B). The approximate locations of features located up to 50 feet outside of the Project area were also recorded during the field surveys, where landowner access was permitted. However, no data forms were collected on features that did not extend into the Project area. These features are shown on the Figure 2 maps in Appendix B as "approximate" wetlands, streams (waterways), open waters, and upland drainage features.

Methods May 12, 2023

# 2.0 METHODS

## 2.1 WETLAND DELINEATION

Prior to completing the field surveys, a desktop review of the Project area was conducted using U.S. Geological Survey (USGS) topographic maps, National Wetlands Inventory (NWI) maps, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, and aerial imagery mapping. Stantec completed a wetland delineation study in accordance with the Corps of Engineers Wetlands Delineation Manual (USACE Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0; USACE 2010). Wetland categories were classified using the Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001).

### 2.2 STREAM DELINEATION

Streams that demonstrated a continuously defined channel (bed and bank), ordinary high water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project area, per the protocols outlined in the USACE's Guidance on Ordinary High Water Mark Identification (Regulatory Guidance Letter, No. 05-05; USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the 22250 Federal Register/Vol. 85, No. 77 (effective June 22, 2020; USACE 2020). Functional assessment of streams within the Project area was based on completion of the Ohio Environmental Protection Agency's (OEPA) Headwater Habitat Evaluation Index (HHEI; OEPA 2020) and/or Qualitative Habitat Evaluation Index (QHEI; OEPA 2006) data forms. The centerline and/or the OHWM locations of each waterway were identified and surveyed using a handheld sub-meter accuracy global positioning system (GPS) unit and mapped with GIS software. Additionally, the locations of upland drainage features (which lacked a continuously defined bed and bank/OHWM) identified within the Project area were also recorded with a sub-meter accuracy GPS unit during the field surveys.

## 2.3 RARE SPECIES

Prior to conducting the field surveys, Stantec contacted the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) for information regarding rare, threatened, or endangered species and their habitats of concern within the vicinity of the Project area (Appendix E – Agency Correspondence). To assess potential impacts to rare, threatened, or endangered species, Stantec scientists conducted a pedestrian reconnaissance of the Project area, collected information on existing habitats within the Project area, and assessed the potential for these habitats to be used by these species.

Results May 12, 2023

# 3.0 RESULTS

## 3.1 TERRESTRIAL HABITAT

Stantec completed field surveys for potentially suitable habitats for threatened and endangered species within the Project area on July 13 and 20, 2022 and April 12 and May 2, 2023. Figure 3 (Appendix B) shows the land cover, vegetation communities, and any identified rare, threatened, or endangered species habitats observed within the Project area during the habitat assessment surveys. Representative photographs of the vegetation communities/habitats identified within the Project area are included in Appendix D of this report (photo locations are shown on Figure 3 in Appendix B). Information regarding the vegetation communities/habitats and land cover types identified within the Project area are provided in Table 1.

Table 1. Vegetation Communities and Land Cover Found within the Beacon Station Project Area, Franklin County, Ohio

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Mixed Early Successional/ Second Growth Deciduous Forest	Moderate Disturbance/Natural Community (dominated by native woody and herbaceous species and/or opportunistic invaders). Common plant species included Osage-orange (Maclura pomifera), multiflora rose (Rosa multiflora), Allegheny blackberry (Rubus allegheniensis), Amur honeysuckle (Lonicera maackii), black walnut (Juglans nigra), common hackberry (Celtis occidentalis), and eastern cottonwood (Populus deltoides).	No	4.58
Old Field	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non- native species, and/or native highly tolerant taxa). Dominant species included Canada thistle (Cirsium arvense), eastern daisy fleabane (Erigeron annuus), Timothy (Phleum pratense), Canada goldenrod (Solidago canadensis), giant ironweed (Vernonia gigantea), common evening primrose (Oenothera biennis), annual ragweed (Ambrosia artemisiifolia),	No	0.87

Results May 12, 2023

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
•	sweet clover (Melilotus officinalis), and yellow foxtail (Setaria pumila).		
Maintained Lawn	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non- native species, and/or native highly tolerant taxa). Dominant species included Canada thistle, Kentucky bluegrass (Poa pratensis), lanceleaf plantain (Plantago lanceolata), and red fescue (Festuca rubra).	No	1.04
Palustrine Emergent Wetland	Intermediate Disturbance (dominated by plants that typify a stable phase of a native community that persists under some disturbance). Dominant species included narrowleaf cattail (Typha angustifolia), broadleaf cattail (Typha latifolia), soft rush (Juncus effusus), and needle spikerush (Eleocharis acicularis).	No	0.55
Palustrine Forested Wetland	Intermediate Disturbance (dominated by plants that typify a stable phase of a native community that persists under some disturbance). Dominant species included boxelder (Acer negundo), eastern cottonwood, common buckthorn (Rhamnus cathartica), and creeping Jenny (Lysimachia nummularia).	No	0.018
Palustrine Scrub-Shrub Wetland	Intermediate Disturbance (dominated by plants that typify a stable phase of a native community that persists under some disturbance). Dominant species included sandbar willow (Salix interior) and reed canarygrass (Phalaris arundinacea).	No	0.023
Existing Paved Road	Extreme Disturbance/existing paved road.	No	0.92
Recently Graded Area	Extreme Disturbance/Ruderal Community (little to no vegetation is present in these habitats).	No	37.88
		TOTAL	45.88

Results May 12, 2023

## 3.2 WETLANDS

Stantec completed field surveys for wetlands within the Project area on July 13 and 20, 2022 and April 12 and May 2, 2023. As a result of the field surveys, Stantec identified 7 wetlands within the Project area. More information regarding the wetlands identified within the Project area is provided in Table 2. Figure 2 (Appendix B) shows the wetlands identified by Stantec within the Project area. Representative photographs of the wetlands identified within the Project area are included in Appendix D of this report (photo locations are shown on Figure 2, Appendix B). Completed wetland determination data forms and ORAM data forms are included in Appendix C. Information regarding the Cowardin classification and ORAM categories of wetlands identified within the Project area is provided in Table 2. The Project area contained two National Wetlands Inventory (NWI) mapped features. Information regarding the disposition of the NWI features is included Table 3.

Results May 12, 2023

Table 2. Summary of Wetland Resources Found within the Beacon Station Project Area, Franklin County, Ohio

Wetland ID	Location					Delineated	ORAM <sup>5</sup>		Nearest	Existing	Proposed		Proposed Impacts	
	Latitude	Longitude	Photo Location <sup>1</sup>	Isolated?2	Habitat Type <sup>3,4</sup>	Area within Project Area (acre)	Score	Category	Proposed Structure Number	Structure Number in Wetland	Structure Number in Wetland	Structure Installation Method	Temporary Matting Area (acre)	Permanent Impact Area (acre)
Wetland 1	40.01298	-83.12404	1	No	PEM	0.015	13	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 2	40.01284	-83.12380	3	No	PEM	0.007	11	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 3	40.01299	-83.12367	5	No	PEM	0.023	11	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 4	40.01151	-83.12065	11	No	PEM	0.46	17	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 5	40.01615	-83.12443	24	No	PFO	0.018	27.5	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 6	40.01771	-83.12446	26	No	PEM	0.002	17	1	N/A	N/A	N/A	N/A	TBD6	TBD <sup>6</sup>
Wetland 7	40.01691	-83.12126	29	No	PSS	0.023	15	1	N/A	N/A	N/A	N/A	TBD6	TBD <sup>6</sup>
TOTAL (												TOTAL	TBD6	TBD6

<sup>&</sup>lt;sup>1</sup> Appendix B - Figure 2 and Appendix D – Wetland and Waterbody Photographs

<sup>&</sup>lt;sup>2</sup> Pending USACE jurisdictional review.

<sup>&</sup>lt;sup>3</sup> Habitat type based on Cowardin et al. (1979).

<sup>&</sup>lt;sup>4</sup> PEM = Palustrine Emergent Wetland

<sup>&</sup>lt;sup>4</sup> PSS = Palustrine Scrub-Shrub Wetland

<sup>&</sup>lt;sup>4</sup> PFO = Palustrine Forested Wetland

<sup>&</sup>lt;sup>5</sup> ORAM Score and Category are based on the Ohio Rapid Assessment Method for Wetland v. 5.0 (Mack 2001).

<sup>&</sup>lt;sup>6</sup> TBD = To be determined. Wetland impact information is unknown at this time.

Table 3. Summary of NWI Disposition within the Beacon Station Project Area, Franklin County, Ohio

NWI Code	NWI Description	Figure 2 Page Number	Related Field Inventoried Resource	Comments
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	1	Stream 1	Stream 1 was delineated within the mapped NWI feature. The HHEI data form completed for this stream is provided in Appendix C. Representative photographs are provided in Appendix D.
R5UBH	Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded	1	Stream 2	Stream 2 was delineated within the mapped NWI feature. The HHEI data form completed for this stream is provided in Appendix C. Representative photographs are provided in Appendix D.

Results May 12, 2023

#### 3.3 STREAMS

Two streams were delineated within the Project area during the field surveys completed on July 13 and 20, 2022 and April 12 and May 2, 2023. Figure 2 (Appendix B) shows the locations of the streams identified by Stantec within the Project area. Representative stream photographs of the streams are included in Appendix D of this report (photo locations are shown on Figure 2, Appendix B). The completed stream data forms are included in Appendix C. Information regarding the stream resources identified within the Project area and proposed impacts information is summarized in Table 4 below and in Appendix A.

#### 3.4 OPEN WATERS

No open waters (i.e., ponds, lakes) were delineated within the Project area during the field surveys completed on July 13 and 20, 2022 and April 12 and May 2, 2023.

Results

May 12, 2023

Table 4. Summary of Stream Resources Found within the Beacon Station Project Area, Franklin County, Ohio

Stream	Location		Stream	Stream	Delineation	Bankfull	OHWM <sup>3</sup>	Field Evaluation			Ohio EPA	Stream	Proposed Impacts	
ID	Latitude/ Longitude	Photo Location <sup>1</sup>	Type <sup>2</sup>	Name	Length (feet)	Width (feet)	Width (feet)	Method <sup>4</sup>	Score	Category/ Rating/OAC Designation <sup>5</sup>	401 Eligibility	Crossing	Fill Type	Length (feet)
Stream 1	40.01392/ -83.12239	10, 14	Intermittent	UNT to Scioto River	413	4.5	3.0	HHEI	41	Modified Class II PHW	Possibly Eligible	TBD6	TBD6	TBD <sup>6</sup>
Stream 2	40.01754/ -83.12310	16, 17, 28	Perennial	UNT to Scioto River	835	20	14	QHEI	35	Poor/Warm- water Habitat	Possibly Eligible	TBD6	TBD6	TBD <sup>6</sup>
				TOTAL	1,248								TOTAL	TBD6

<sup>1</sup> Appendix B – Figure 2 and Appendix D – Wetland and Waterbody Photographs

<sup>&</sup>lt;sup>2</sup> Stream Classification is based on the 22250 Federal Register/Vol. 85, No. 10 (USACE 2002).

<sup>&</sup>lt;sup>3</sup> OHWM = Ordinary High Water Mark

<sup>&</sup>lt;sup>4</sup> HHEI = Headwater Habitat Evaluation Index

<sup>&</sup>lt;sup>4</sup> QHEI = Qualitative Habitat Evaluation Index

<sup>&</sup>lt;sup>5</sup> PHW = Primary Headwater

<sup>&</sup>lt;sup>6</sup> TBD = To be determined. Stream crossing information and impact information is unknown at this time.

# 3.5 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 5. Summary of Potential Federally Listed and Ohio State-Listed Species within the Beacon Station Project Area, Franklin County, Ohio

Common Name/ Scientific Name	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix E)	Potential Impacts and Avoidance Dates
Indiana Bat/Myotis sodalis	E	E	The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas. Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007; USFWS 2022b). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).	No potentially suitable winter hibernacula were observed within the Project area. However, potentially suitable summer foraging and roosting habitat (mixed early successional/second growth deciduous forest) was observed within the Project area.	ODNR - This Project lies within the range of the Indiana bat. If trees are present within the Project area, and trees must be cut, the ODNR recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with diameter at breast height (dbh) ≥ 20 inches if possible. If trees are present within the Project area, and trees must be cut during the summer months, the ODNR recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. In addition, the ODNR recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If the habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the Project area, please send this information to the ODNR for projects-specific recommendations.  USFWS - If the proposed Project area contains trees ≥3 inches dbh, the USFWS recommends that trees be saved wherever possible. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, USFWS recommends that removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats. 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.	No suitable winter hibernacula were observed in the Project area and no abandoned underground mines or caves were identified within the Project area or within 0.25 miles of the Project area as part of the bat hibernacula desktop study (Figure 4; Appendix B). However, potentially suitable summer foraging and roosting habitat (mixed early successional/second growth deciduous forest) was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing potentially suitable roosting habitat and will proceed in accordance with agency requirements.  Avoidance Dates: April 1 through September 30
Northern Long-eared Bat/Myotis septentrionalis	E	E	The northern long-eared bat is found throughout Ohio. This species generally forages in forested habitat and openings in forested habitat and utilizes cracks, cavities, and loose bark within live and dead trees, as well as buildings as roosting habitat (Brack et al. 2010; USFWS 2022a). The species utilizes caves and abandoned mines as winter hibernacula. Various sized caves are used	No potentially suitable winter hibernacula were observed within the Project area. However, potentially suitable summer foraging and roosting	ODNR - This Project lies within the range of the northern long-eared bat. If trees are present within the Project area, and trees must be cut, the ODNR recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with diameter at breast height (dbh) ≥ 20 inches if possible. If trees are present within the Project area, and trees	No suitable winter hibernacula were observed in the Project area and no abandoned underground mines or caves were identified within the Project area or within 0.25 miles of the Project area as part of the bat hibernacula desktop study (Figure 4; Appendix B). However, potentially suitable summer foraging and roosting habitat (mixed early

Common Name/	*State Listed	*Federally Listed	Typical Habitat	Habitat Observed	Agency Comment**	Potential Impacts and Avoidance Dates
Scientific Name	Status	Status	Typical Habilal	nabilal Observed	(Appendix E)	rolefiliai impacis ana Avoidance Dales
			providing they have a constant temperature, high humidity, and little to no air current (Brack et al. 2010).	habitat (mixed early successional/second growth deciduous forest) was observed within the Project area.	must be cut during the summer months, the ODNR recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. In addition, the ODNR recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If the habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the Project area, please send this information to the ODNR for projects-specific recommendations.	successional/second growth deciduous forest) was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing potentially suitable roosting habitat and will proceed in accordance with agency requirements.  Avoidance Dates: April 1 through September 30
					<b>USFWS</b> - If the proposed Project area contains trees ≥3 inches dbh, the USFWS recommends that trees be saved wherever possible. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, USFWS recommends that removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal tree clearing is recommended to avoid adverse effects to the northern long-eared bat.	
Little Brown Bat/Myotis lucifugus	E	N/A	This bat uses a wide range of habitats and man-made structures for roosting, including buildings and attics. Less frequently, they use hollows of trees. Winter hibernation sites typically consist of caves, tunnels, abandoned mines. Foraging habitat for this species generally occurs over water, along the edges of lakes and stream or in woodlands near waterbodies (NatureServe 2022).	No potentially suitable winter hibernacula were observed within the Project area. However, potentially suitable summer foraging habitat and roosting habitat (mixed early successional/second growth deciduous forest) was observed in the Project area.	ODNR – This Project lies within the range of the little brown bat. If trees are present within the Project area, and trees must be cut, the ODNR recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with diameter at breast height (dbh) ≥ 20 inches if possible. If trees are present within the Project area, and trees must be cut during the summer months, the ODNR recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. In addition, the ODNR recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If the habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the Project area, please send this information to the ODNR for projects-specific recommendations.	No suitable winter hibernacula were observed in the Project area and no abandoned underground mines or caves were identified within the Project area or within 0.25 miles of the Project area as part of the bat hibernacula desktop study (Figure 4; Appendix B). However, potentially suitable summer foraging and roosting habitat (mixed early successional/second growth deciduous forest) was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing potentially suitable roosting habitat and will proceed in accordance with agency requirements.  Avoidance Dates: April 1 through September 30
Tricolored Bat/Perimyotis			This species is found throughout Ohio and is associated	No potentially	USFWS - No comments received.  ODNR – This Project lies within the range of the	No suitable winter hibernacula were observed
subflavus	E	PE	with forested landscapes, foraging near trees and along waterways. Maternity and summer roosts usually occur in	suitable winter hibernacula were	tricolored bat. If trees are present within the Project area, and trees must be cut, the ODNR recommends	in the Project area and no abandoned underground mines or caves were identified

Common Name/ Scientific Name	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix E)	Potential Impacts and Avoidance Dates
			dead or live tree foliage, or in the south, in clumps of Spanish moss. Maternity colonies may also use tree cavities or man-made structures, such as buildings or bridges. Caves, mines, and rock crevices may be used as night roosts between foraging (NatureServe 2022).	observed within the Project area. However, potentially suitable summer foraging and roosting habitat (mixed early successional/second growth deciduous forest) was observed in the Project area.	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 diameter at breast height (dbh) ≥ 20 inches if possible. If trees are present within the Project area, and trees must be cut during the summer months, the ODNR recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. In addition, the ODNR recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If the habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the Project area, please send this information to the ODNR for projects-specific recommendations.	within the Project area or within 0.25 miles of the Project area as part of the bat hibernacula desktop study (Figure 4; Appendix B). However, potentially suitable summer foraging and roosting habitat (mixed early successional/second growth deciduous forest) was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing potentially suitable roosting habitat and will proceed in accordance with agency requirements.  Avoidance Dates: April 1 through September 30
Clubshell/Pleurobema clava	E	E	This is a species of small to medium-sized rivers and streams; generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle, and cannot tolerate mud or slackwater conditions (NatureServe 2022).	No suitable habitat was observed within the Project area.	USFWS - No comments received.  ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - Due to the project type, size, and location, we do not anticipate adverse effects to this species.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Rayed Bean/Villosa fabalis	E	E	Habitat includes gravel or sandy substrate, especially in areas of thick roots of aquatic plants, and increased substrate stability (NatureServe 2022; Parmalee and Bogan 1998). Rayed bean can be associated with shoal or riffle areas, and in shallow, wave-washed areas of glacial lakes. It is generally found in smaller, headwater creeks, but sometimes in larger rivers and open-water bodies. It can occur in shallow riffles or in lakes with water depths up to four feet. It has been found in riffles, generally in vegetation, and deeply buried in sand and gravel bound together by roots (Parmalee and Bogan 1998).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - Due to the project type, size, and location, we do not anticipate adverse effects to this species.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Northern Riffleshell/ Epioblasma torulosa rangiana	E	Е	This species inhabits riffles in small to large streams with swift current and a substrate of firmly packed fine gravel and sand (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - Due to the project type, size, and location, we do not anticipate adverse effects to this species.	No suitable habitat was observed within the Project area. No in-water work is proposed to occur by AEP. Therefore, no impacts to this species are anticipated.
Snuffbox/Epioblasma triquetra	Е	E	Occurs in medium-sized streams to large rivers generally on mud, rocky, gravel, or sand substrates in flowing	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.	No suitable habitat was observed within the Project area and no in-water work is proposed

Common Name/ Scientific Name	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix E)	Potential Impacts and Avoidance Dates
			water. Often deeply buried in substrate and overlooked by collectors (NatureServe 2022).		USFWS - Due to the project type, size, and location, we do not anticipate adverse effects to this species.	to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Purple Cat's Paw/ Epioblasma obliquata obliquata	E	E	Found in Lake Erie tributaries, Ohio River tributaries, and headwater and small inland streams (ODNR 2020).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - Due to the project type, size, and location, we do not anticipate adverse effects to this species.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Rabbitsfoot/Quadrula cylindrica cylindrica	Т	Т	The typical habitat for this species is small to medium rivers with moderate to swift currents, and in smaller streams it inhabits bars or gravel and cobble close to the fast current. Found in medium to large rivers in sand and gravel shoals (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - Due to the project type, size, and location, we do not anticipate adverse effects to this species.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Elephant-ear/Elliptio crassidens crassidens	E	N/A	An inhabitant of channels in large creeks to rivers with moderate to swift currents, primarily on sand and limestone or rock substrates (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Pocketbook/Lampsilis ovata	E	N/A	Very generalized in habitat preference, adapting well to both impoundment situations as well as free-flowing, shallow rivers. Usually found in moderate to strong current, it can survive in standing water. The most suitable substrate consists of a mixture of gravel and coarse sand mixed with some silt or mud (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Long Solid/Fusconaia maculata maculata	E	N/A	This mussel is found in the gravel substrates of shoals and riffles of large rivers, as well as impounded areas (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Washboard/ Megalonaias nervosa	E	N/A	This species is typically a large river species, living in the main channel and in some of the overbank areas of reservoirs, but in some instances, it may also become established in medium-sized and even small rivers. It is found in areas with a slow current with muddy to coarse gravel substrates (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Ohio Pigtoe/ Pleurobema cordatum	E	N/A	This mussel prefers strong currents of large rivers with substrates of sand and gravel, though is somewhat tolerant of lentic systems (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.

Common Name/ Scientific Name	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix E)	Potential Impacts and Avoidance Dates
Pondhorn/Uniomerus tetralasmus	T	N/A	This species typically inhabits the quiet or slow-moving, shallow waters of sloughs, borrow pits, ponds, ditches, and meandering streams. It is tolerant to poor water conditions and can be found well buried in a substrate of fine silt and/or mud (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Salamander Mussel/ Simpsonaias ambigua	T	N/A	Preferred habitat is in sand or silt under large, flat stones in areas of a swift current in medium to large rivers and lakes (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated.
Goldeye/Hiodon alosoides	E	N/A	Habitat includes quiet turbid water of medium to large lowland rivers, small lakes, ponds, fringe wetlands and muddy shallows of larger lakes. Occurs in shallow firm-bottomed sites in river pools or backwaters or over gravel shoals in tributary streams (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitats. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species or other aquatic species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams or ponds/lakes by AEP. Therefore, no impacts to this species are anticipated and avoidance dates are not applicable.
Shortnose Gar/ Lepisosteus platostomus	Е	N/A	Habitat includes large weedy lakes and reservoirs, backwaters and quiet pools of medium to large rivers, stagnant ponds, sloughs, canals, brackish waters of coastal inlets, occasionally coastal marine waters; often near vegetation or close to submerged or overhanging objects by day. Young tend to occupy shallows, larger individuals in deeper water. Spawning occurs over weed beds of shallow waters in rivers, usually in grass and weeds in shoal water in lakes; or near stone piles of railroad bridges, in nests of smallmouth bass, or over gravel bars (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitats. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species or other aquatic species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams or ponds/lakes by AEP. Therefore, no impacts to this species are anticipated and avoidance dates are not applicable.
lowa Darter/ Etheostoma exile	Е	N/A	Habitat includes clear sluggish vegetated headwaters, creeks, and small to medium rivers; weedy portions of glacial lakes, marshes, and ponds; over substrates of sand, peat, and/or organic debris. This darter occurs in deeper lake waters and in stream pools when not breeding (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitats. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species or other aquatic species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams or ponds/lakes by AEP. Therefore, no impacts to this species are anticipated and avoidance dates are not applicable.
Spotted Darter/ Etheostoma maculatum	E	N/A	Habitat includes large rubble and boulder areas, adjacent to or in swift deep riffles, in small to medium, clear rivers. Adults apparently spend the winter in areas somewhat deeper and with slower current (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitats. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species or other aquatic species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated and avoidance dates are not applicable.

Common Name/ Scientific Name	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix E)	Potential Impacts and Avoidance Dates
Northern Brook Lamprey/Ichthyomyzon fossor	Е	N/A	Adult lampreys are found in clear brooks with fast flowing water and sand or gravel bottoms. Juveniles are found in slow moving water buried in soft substrate in medium to large streams (ODNR 2020).	No suitable habitat was observed within the Project area.	ODNR – The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitats. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species or other aquatic species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts to this species are anticipated and avoidance dates are not applicable.
Tonguetied Minnow/ Exoglossum laurae	E	N/A	Habitat includes rocky pools and runs of cool to warm, usually clear, creeks and small to medium rivers of moderate gradient, generally with relatively unsilted bottoms of gravel, rubble, and boulder, often at deeper exits of pools near vegetation or other cover (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitats. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species or other aquatic species.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts are anticipated and avoidance dates are not applicable.
					USFWS - No comments received.	
Popeye Shiner/Notropis ariommus	E	N/A	Habitat includes warm, relatively clear flowing waters of large creeks and small to medium rivers; these shiners are closely associated with gravel substrate; typically, they occur in runs, backwaters near appreciable current, and the head of pools (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitats. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species or other aquatic species.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by AEP. Therefore, no impacts are anticipated and avoidance dates are not applicable.
					<b>USFWS</b> - No comments received.	
Lake Chubsucker/ Erimyzon sucetta	Т	N/A	Habitat includes ponds, lakes, oxbows, sloughs, swamps, impoundments, quiet pools of creeks and small rivers, and similar waters of little or no flow that are clear and have bottoms of sand or silt mixed with organic debris; aquatic vegetation is usually present (NatureServe 2022.)	No suitable habitat was observed within the Project area.	ODNR – The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitats. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species or other aquatic species.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams or ponds/lakes by AEP. Therefore, no impacts are anticipated and avoidance dates are not applicable.
					<b>USFWS</b> - No comments received.	
Paddlefish/Polyodon spathula	ī	N/A	Habitat includes slow-flowing water of large and medium-sized rivers, river-margin lakes, channels, oxbows, backwaters, impoundments with access to spawning areas. This fish prefers depths greater than 1.5 m; it seeks deeper water in late fall and winter. Individuals may congregate near human-made structures that create eddies and reduce current velocity (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitats. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species or other aquatic species.  USFWS - No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams or ponds/lakes by AEP. Therefore, no impacts are anticipated and avoidance dates are not applicable.
American Bittern/ Botaurus lentiginosus	E	N/A	Typically found primarily in large freshwater and (less often) brackish marshes, including lake and pond edges where cattails, sedges, or bulrushes are plentiful and marshes where there are patches of open water and aquatic bed vegetation. Nest primarily in inland	No suitable nesting habitat was observed within the Project area.	ODNR – The Project is within the range of the American bittern. Nesting American bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby	No suitable nesting habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.

Common Name/ Scientific Name	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix E)	Potential Impacts and Avoidance Dates
			freshwater wetlands, sometimes in tidal marshes or in sparsely vegetated wetlands or dry grassy uplands (NatureServe 2022).		swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to July 31. If this type of habitat will not be impacted, the Project is not likely to impact this species.	
					<b>USFWS</b> - No comments received.	
Black-crowned Night- heron/Nycticorax nycticorax	Т	N/A	Typically found in marshes, swamps, wooded streams, mangroves, shores of lakes, ponds, lagoons, salt water, brackish and freshwater situations. This species roosts by day in mangroves or swampy woodland and usually nests with other heron species (NatureServe 2022).	No suitable nesting habitat was observed within the Project area.	ODNR – The Project is within the range of the black-crowned night heron. Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands, 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, the Project is not likely to impact this species.	No suitable nesting habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.
					<b>USFWS</b> - No comments received.	
Lark Sparrow/ Chondestes grammacus	Е	N/A	Breeding habitat includes various open situations with scattered bushes and trees: shortgrass, mixed-grass, and tallgrass prairie with a shrub component and sparse litter; parkland; sandhills; barrens; old fields; cultivated fields; shrub thickets; woodland edges; orchards; parks; riparian areas; brushy pastures; overgrazed pastures; and savanna. Nests are either on the ground or close to the ground located in sparse ground cover (NatureServe 2022).	No suitable nesting habitat was observed within the Project area.	ODNR – The Project is within the range of the lark sparrow. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. 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 habitat will not be impacted, the Project is not likely to impact this species.	No suitable nesting habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.
					USFWS - No comments received.  ODNR – The Project is within the range of the least	
Least Bittern/Ixobrychus exilis	Т	N/A	Occurs in tall emergent vegetation in marshes, primarily freshwater, less commonly in coastal brackish marshes and mangrove swamps. Prefers marshes with scattered bushes or other woody growth (NatureServe 2022).	No suitable nesting habitat was observed within the Project area.	bittern. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open 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 habitat will not be impacted, the Project is not likely to impact this species.	No suitable nesting habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.
			Proods in wide ones habitate remains from Archis has due	No suitable sestime	USFWS - No comments received.	No suitable posting habitaturas absorred uithir
Northern Harrier/Circus hudsonius	Е	N/A	Breeds in wide-open habitats ranging from Arctic tundra to prairie grasses to fields and marshes. Nests are concealed on the ground in grasses or wetland vegetation (All About Birds 2022).	No suitable nesting habitat was observed within the Project area.	ODNR – The Project is within the range of the northern harrier. This is a common migrant and winter species.  Nesters are much rarer, although they occasionally breed in large marshes and grasslands. If this type of	No suitable nesting habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.

Common Name/ Scientific Name	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix E)	Potential Impacts and Avoidance Dates
					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, the Project is not likely to impact this species.  USFWS - No comments received.  ODNR - The Project is within the range of the sandhill crane. Sandhill cranes are primarily a wetland-	
Sandhill Crane/Grus canadensis	Т	N/A	Breeding habitat includes open grasslands, marshes, marshy edges of lakes and ponds, and riverbanks. Nests are on the ground or in shallow water on open tundra, large marshes, bogs, fens, or wet forest meadows. During nonbreeding season, sandhill cranes roost at night in shallow water along river channels, on alluvial islands of braided rivers, or in natural basin wetlands (NatureServe 2022.)	No suitable nesting habitat was observed within the Project area.	dependent species. On their wintering grounds, they will utilize agricultural fields. However, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, the Project is not likely to impact this species.  USFWS - No comments received.	No suitable nesting habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.
Upland Sandpiper/ Bartramia longicauda	E	N/A	Breeding habitat is restricted primarily to extensive, open tracts of short grassland habitat. Nest in native prairie, dry meadows, pastures, domestic hayfields, short-grass savanna, plowed fields, along highway right-of-way and on airfields, and (in the north) peatlands and scattered woodlots near timberline (NatureServe 2022.)	No suitable nesting habitat was observed within the Project area.	ODNR – The Project is within the range of the upland sandpiper. 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 habitat will not be impacted, the Project is not likely to impact this species.  USFWS - No comments received.	No suitable nesting habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.

<sup>\*</sup>Status key: E=Endangered; T=Threatened; PE=Proposed Endangered

<sup>\*\*</sup>The information is based on the literature review response information from ODNR and USFWS and is study area/project specific.

Conclusions and Recommendations May 12, 2023

#### 4.0 CONCLUSIONS AND RECOMMENDATIONS

Stantec conducted a wetland and waterbody delineation and a preliminary habitat assessment for threatened and endangered species within the Project area on July 13 and 20, 2022 and April 12 and May 2, 2023. During the field surveys, one perennial stream and one intermittent stream totaling 1,248 linear feet were delineated within the Project area. Additionally, one palustrine scrub-shrub wetland, one palustrine forested wetland, and five palustrine emergent wetlands totaling 0.55 acre were delineated within the Project area. No open water features were observed within the Project area. Two mapped National Wetlands Inventory features were identified within the Project area, though both of which were determined to be streams and not wetlands.

The information provided by Stantec regarding wetland and stream boundaries is based on an analysis of the wetland and upland conditions present within the Project area at the time of the field work. The delineations were performed by experienced and qualified professionals using regulatory agency-accepted practices and sound professional judgment.

An ODNR Ohio Natural Heritage Program data request and environmental review request letter was sent to the ODNR Office of Real Estate on June 24, 2022. The ODNR Office of Real Estate response letter dated July 18, 2022 (Appendix E), stated that the entire state of Ohio is within the range of the state-listed endangered Indiana bat, northern long-eared bat, little brown bat, and tricolored bat. If trees are present within the Project area, and trees must be cut, the ODNR recommends cutting only occur from October 1 – March 31, conserving trees with loose, shaggy bark and/or crevices holes, or cavities as well as trees with diameter at breast height (dbh)  $\geq$  20 inches if possible. If trees are present within the Project area and trees must be cut during the summer months, the ODNR recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. If state-listed bats are documented, the ODNR recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the ODNR.

The ODNR also recommends a desktop habitat assessment, followed by a field assessment if needed, be conducted to determine if there are potential bat hibernacula present within the Project area. Stantec completed a habitat desktop assessment in accordance with the 2022 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2022b) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2022b) and locations of known or suspected karst geology (ODNR 2022a). The desktop assessment did not identify any karst features or abandoned underground mines within 0.25 miles of the Project area (Figure 4, Appendix B). Additionally, no potentially suitable bat hibernacula were observed within the Project area during the field surveys. However, potentially suitable summer foraging and roosting habitat (mixed early successional/second growth deciduous forest) was observed within the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable roost habitat and will proceed in accordance with agency requirements.

Conclusions and Recommendations May 12, 2023

According to the ODNR response letter, the Project is within the range of the federally listed and state-listed endangered clubshell, rayed bean, northern riffleshell, snuffbox, and purple cat's paw, the federally listed threatened and state-listed endangered rabbitsfoot, the state-listed endangered elephant-ear, pocketbook, long solid, washboard, and Ohio pigtoe, and the state-listed threatened pondhorn and salamander mussel. Due to the location, and that there is no inwater work proposed in a perennial stream of sufficient size, the ODNR stated that this Project is not likely to impact these mussel species.

This Project is within the range of the state-listed endangered goldeye, shortnose gar, lowa darter, spotted darter, northern brook lamprey, tonguetied minnow, and popeye shiner and the state-listed threatened lake chubsucker and paddlefish. The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to these indigenous aquatic species and their habitat. Since no in-water work is proposed in a perennial stream, this Project is not likely to impact these fish species.

The ODNR response letter stated that the Project is within the range of the state-listed endangered American bittern and lark sparrow and the state-listed threatened black-crowned night-heron and least bittern. If these birds' nesting habitat will be impacted, construction should be avoided in preferred nesting habitat during the species nesting period of May 1 through July 31. Suitable nesting habitat for these species was not observed within the Project area. Therefore, this Project is not likely to impact these species.

The Project is within the range of the state-listed endangered northern harrier and upland sandpiper. If these birds' nesting habitat will be impacted, construction should be avoided in preferred nesting habitat during the species nesting period of April 15 through July 31. No suitable nesting habitat for these species was observed for these species within the Project area. Therefore, this Project is not likely to impact these species.

The ODNR response letter also stated that the Project is within the range of the state-listed threatened sandhill crane. If this bird's nesting habitat will be impacted, construction should be avoided in preferred nesting habitat during the species nesting period of April 1 through August 31. No suitable nesting habitat was observed within the Project area. Therefore, this Project is not likely to impact this species.

A technical assistance request letter was also submitted to the USFWS on June 24, 2022. The USFWS response letter dated July 11, 2022, recommends that the proposed Project avoid and minimize impacts to all wetland habitats to the maximum extent possible and natural buffers around streams and wetlands should be preserved to enhance beneficial functions.

According to the USFWS response letter, the entire State of Ohio lies within the range of the federally endangered northern long-eared bat and Indiana bat. Therefore, USFWS recommends that trees  $\geq 3$  inches dbh be saved wherever possible and any tree removal that is unavoidable should only occur between October 1 and March 31 to avoid adverse effects to these species.

Conclusions and Recommendations May 12, 2023

The Project area contains potentially suitable foraging habitat for the Indiana bat and northern long-eared bat in the form of mixed early successional/second growth deciduous forest. Following the seasonal tree clearing recommendation should ensure that any effects to Indiana bats and northern long-eared bats are insignificant and discountable. No potentially suitable bat hibernacula were observed within the Project area.

The USFWS also stated that due to the project type, size, and location, they do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat (Appendix E).

References May 12, 2023

### 5.0 REFERENCES

- All About Birds. 2022. Northern Harrier Identification. Available at: https://www.allaboutbirds.org/guide/Northern\_Harrier/id. Accessed August 2022.
- Brack, Virgil Jr., Dale W. Sparks, John O. Whitaker Jr., Brianne L. Walters, and Angela Boyer. 2010. Bats of Ohio. Indiana State University Center for North American Bat Research and Conservation.
- Mack, J.J. 2001. Ohio Rapid Assessment Method for Wetlands, Manual for Using Version 5.0. Ohio EPA Technical Bulletin Wetland/2001-1-1. Ohio Environmental Protection Agency, Division of Surface Water, 401 Wetland Ecology Unit, Columbus, Ohio.
- NatureServe. 2022. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, VA. U.S.A. Available at http://explorer.natureserve.org. Accessed August 2022.
- Ohio Department of Natural Resources (ODNR), Division of Geological Survey. 2022a. Karst Interactive Map. Available online at Karst Interactive Map Viewer (ohiodnr.gov). Accessed August 2022.
- ODNR, Division of Mineral Resources and Division of Geological Survey. Mines of Ohio. 2022b. Available online at ODNR Mines of Ohio Viewer (ohiodnr.gov). Accessed August 2022.
- ODNR Division of Wildlife. 2020. Species Guide Index. Available at http://wildlife.ohiodnr.gov/species-and-habitats/species-guide-index/. Accessed January 2020.
- Ohio Environmental Protection Agency (OEPA). 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI).
- OEPA. 2020. Field Methods for Evaluating Primary Headwater Streams in Ohio. Version 4.1. Ohio EPA Division of Surface Water, Columbus, Ohio. 130 pp.
- Parmalee, P. W. and A. E. Bogan. 1998. The Freshwater Mussels of Tennessee. University of Tennessee Press: Knoxville, Tennessee. 328 pp.
- U.S. Army Corps of Engineers (USACE), Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y 87 1, U.S. Army Engineer Waterway Experiment Station, Vicksburg, Mississippi.
- USACE. 2002. Issuance of Nationwide Permits; Notice, 67 Fed. Reg. 10. January 15, 2002. Federal Register: The Daily Journal of the United States. Available at https://www.gpo.gov/fdsys/pkg/FR-2002-01-15/pdf/02-539.pdf.

References May 12, 2023

- USACE. 2005. Guidance on Ordinary High Water Mark Identification (Regulatory Guidance Letter, No. 05-05). Available online at https://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-05.pdf. Accessed December 2021.
- USACE. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Fish and Wildlife Service (USFWS). 2007. Indiana bat (*Myotis sodalis*) draft recovery plan: First revision. U.S. Fish and Wildlife Service, Ft. Snelling, Minnesota. 258 pp.
- USFWS. 2022a. Northern Long-eared Bat (Myotis septentrionalis). Available online at https://www.fws.gov/midwest/Endangered/mammals/nleb/nlebFactSheet.html. Accessed August 2022.
- USFWS. 2022b. 2022 Range-wide Indiana Bat & Northern Long-eared Bat Survey Guidelines, March 2022. Available at https://www.fws.gov/sites/default/files/documents/USFWS\_Range-wide\_IBat\_%26\_NLEB\_Survey\_Guidelines\_2022.03.29.pdf\_Accessed August 2022.

Wetland and stream Impact Tables May 12, 2023

# Appendix A WETLAND AND STREAM IMPACT TABLES

### Summary of Wetland Resources Found within the Beacon Station Project Area, Franklin County, Ohio

		Location				Delineated Area	С	RAM⁵	Negrest	Existing	Proposed		Proposed	l Impacts
Wetland ID	Latitude	Longitude	Photo Location <sup>1</sup>	Isolated?²	Habitat Type <sup>3,4</sup>	within Project Area (acre)	Score	Category	Proposed Structure Number	Structure Number in Wetland	Structure Number in Wetland	Structure Installation Method	Temporary Matting Area (acre)	Permanent Impact Area (acre)
Wetland 1	40.01298	-83.12404	1	No	PEM	0.015	13	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 2	40.01284	-83.12380	3	No	PEM	0.007	11	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 3	40.01299	-83.12367	5	No	PEM	0.023	11	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 4	40.01151	-83.12065	11	No	PEM	0.46	17	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 5	40.01615	-83.12443	24	No	PFO	0.018	27.5	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 6	40.01771	-83.12446	26	No	PEM	0.002	17	1	N/A	N/A	N/A	N/A	TBD6	TBD6
Wetland 7	40.01691	-83.12126	29	No	PSS	0.023	15	1	N/A	N/A	N/A	N/A	TBD6	TBD6
	TOTAL											TOTAL	TBD6	TBD6

<sup>&</sup>lt;sup>1</sup> Appendix B - Figure 2 and Appendix D – Wetland and Waterbody Photographs

<sup>&</sup>lt;sup>2</sup> Pending USACE jurisdictional review.

<sup>&</sup>lt;sup>3</sup> Habitat type based on Cowardin et al. (1979).

<sup>&</sup>lt;sup>4</sup> PEM = Palustrine Emergent Wetland

<sup>&</sup>lt;sup>4</sup> PSS = Palustrine Scrub-Shrub Wetland

<sup>&</sup>lt;sup>4</sup> PFO = Palustrine Forested Wetland

<sup>&</sup>lt;sup>5</sup> ORAM Score and Category are based on the Ohio Rapid Assessment Method for Wetland v. 5.0 (Mack 2001).

<sup>&</sup>lt;sup>6</sup> TBD = To be determined. Wetland impact information is unknown at this time.

### Summary of Stream Resources Found within the Beacon Station Project Area, Franklin County, Ohio

1,248

Stream	Location		Stream	Stream	Delineation	Bankfull	OHWM <sup>3</sup>	Field Evaluation			Ohio EPA	Stream	Proposed Impacts	
ID	Latitude/ Longitude	Photo Location <sup>1</sup>	Type <sup>2</sup>	Name	Length (feet)	Width (feet)	Width (feet)	Method <sup>4</sup>	Score	Category/ Rating/OAC Designation <sup>5</sup>	401 Eligibility	Crossing	Fill Type	Length (feet)
Stream 1	40.01392/ -83.12239	10, 14	Intermittent	UNT to Scioto River	413	4.5	3.0	HHEI	41	Modified Class II PHW	Possibly Eligible	TBD6	TBD <sup>6</sup>	TBD6
Stream 2	40.01754/ -83.12310	16, 17, 28	Perennial	UNT to Scioto River	835	20	14	QHEI	35	Poor/Warm- water Habitat	Possibly Eligible	TBD6	TBD6	TBD6

TOTAL

TBD6

TOTAL

<sup>&</sup>lt;sup>1</sup> Appendix B – Figure 2 and Appendix D – Wetland and Waterbody Photographs

<sup>&</sup>lt;sup>2</sup> Stream Classification is based on the 22250 Federal Register/Vol. 85, No. 10 (USACE 2002).

<sup>&</sup>lt;sup>3</sup> OHWM = Ordinary High Water Mark

<sup>&</sup>lt;sup>4</sup> HHEI = Headwater Habitat Evaluation Index

<sup>&</sup>lt;sup>4</sup> QHEI = Qualitative Habitat Evaluation Index

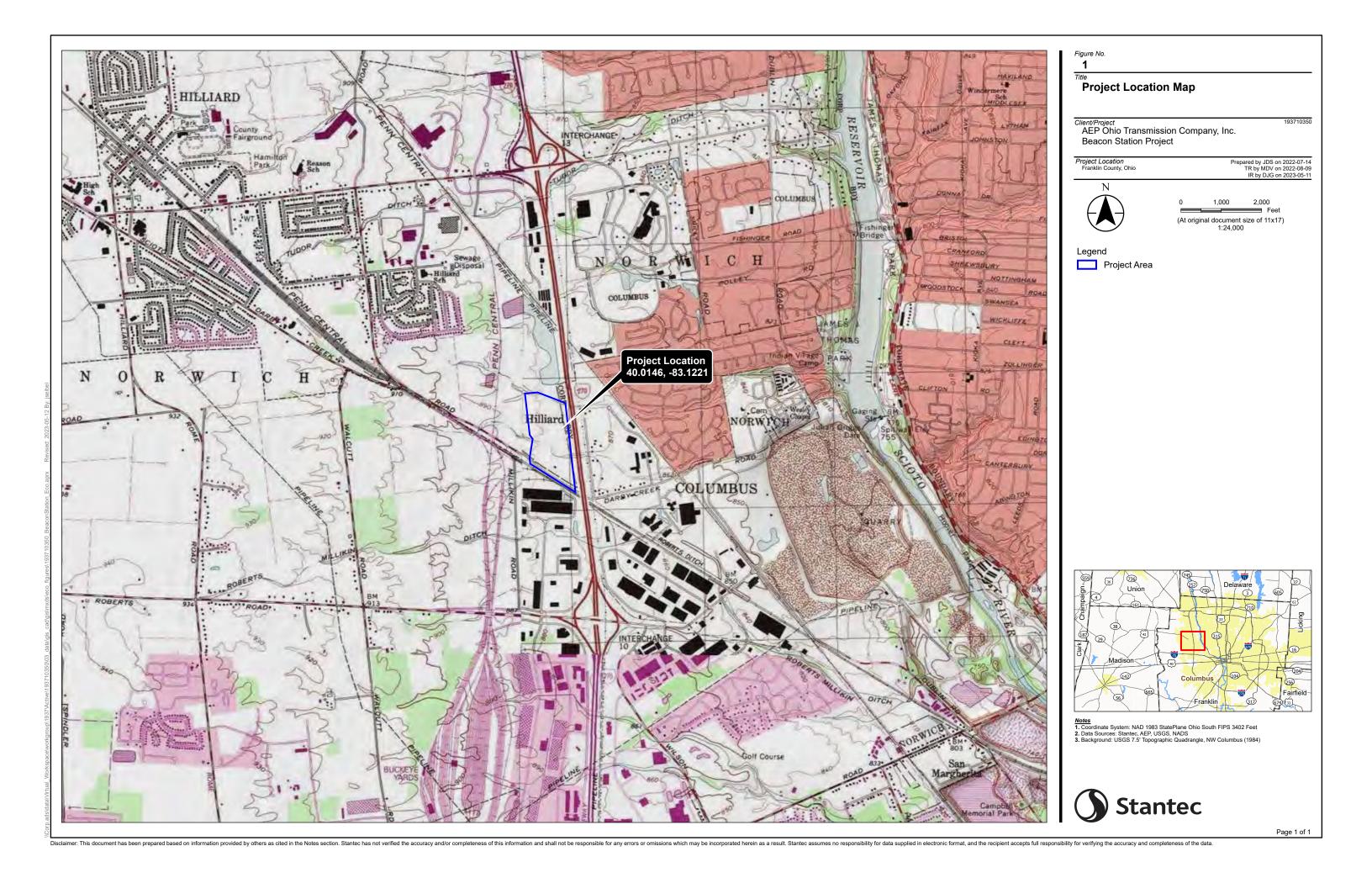
<sup>&</sup>lt;sup>5</sup> PHW = Primary Headwater

<sup>&</sup>lt;sup>6</sup> TBD = To be determined. Stream crossing information and impact information is unknown at this time.

Figures May 12, 2023

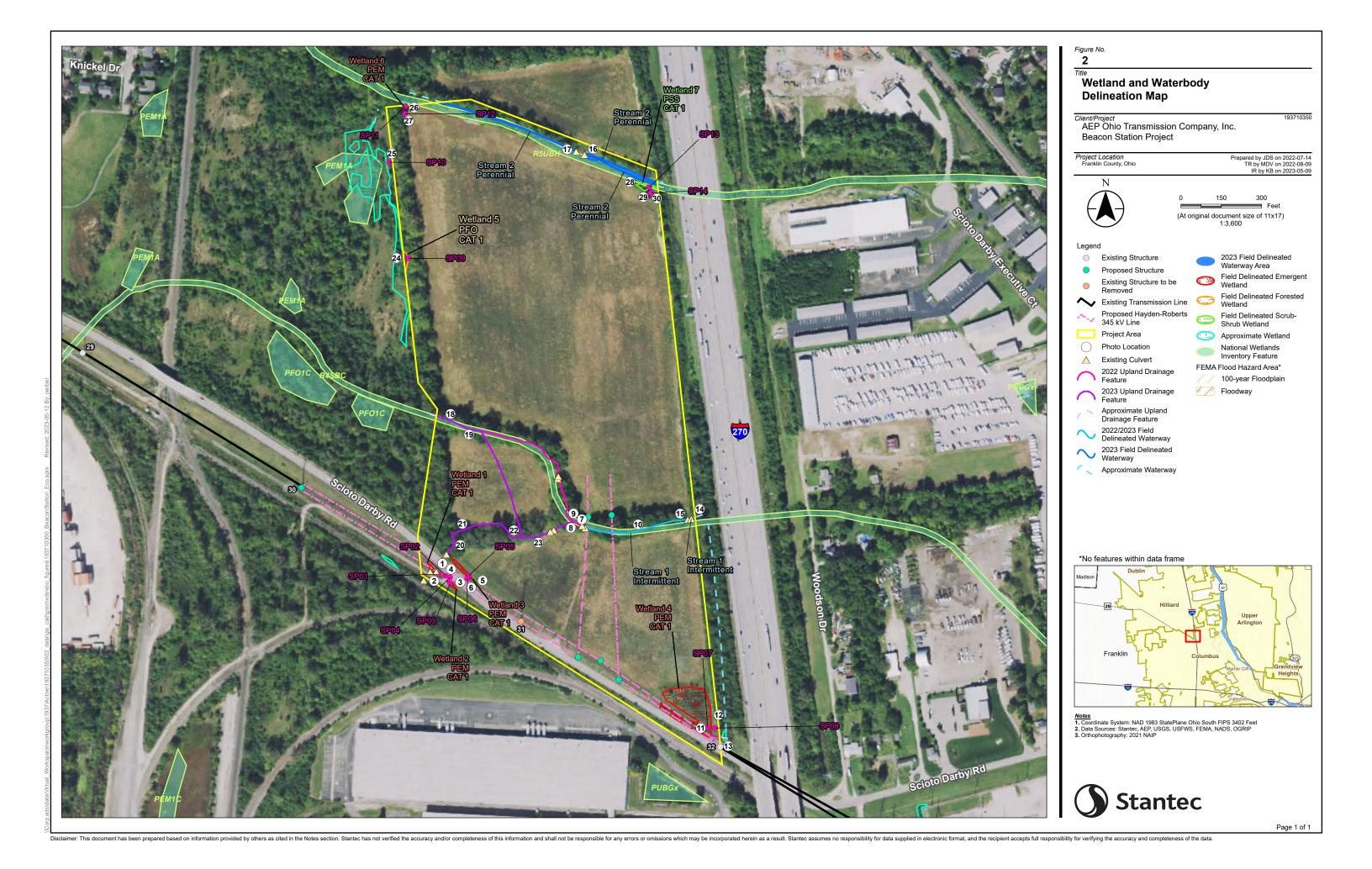
# **Appendix B FIGURES**

# **B.1** FIGURE 1 - PROJECT LOCATION MAP



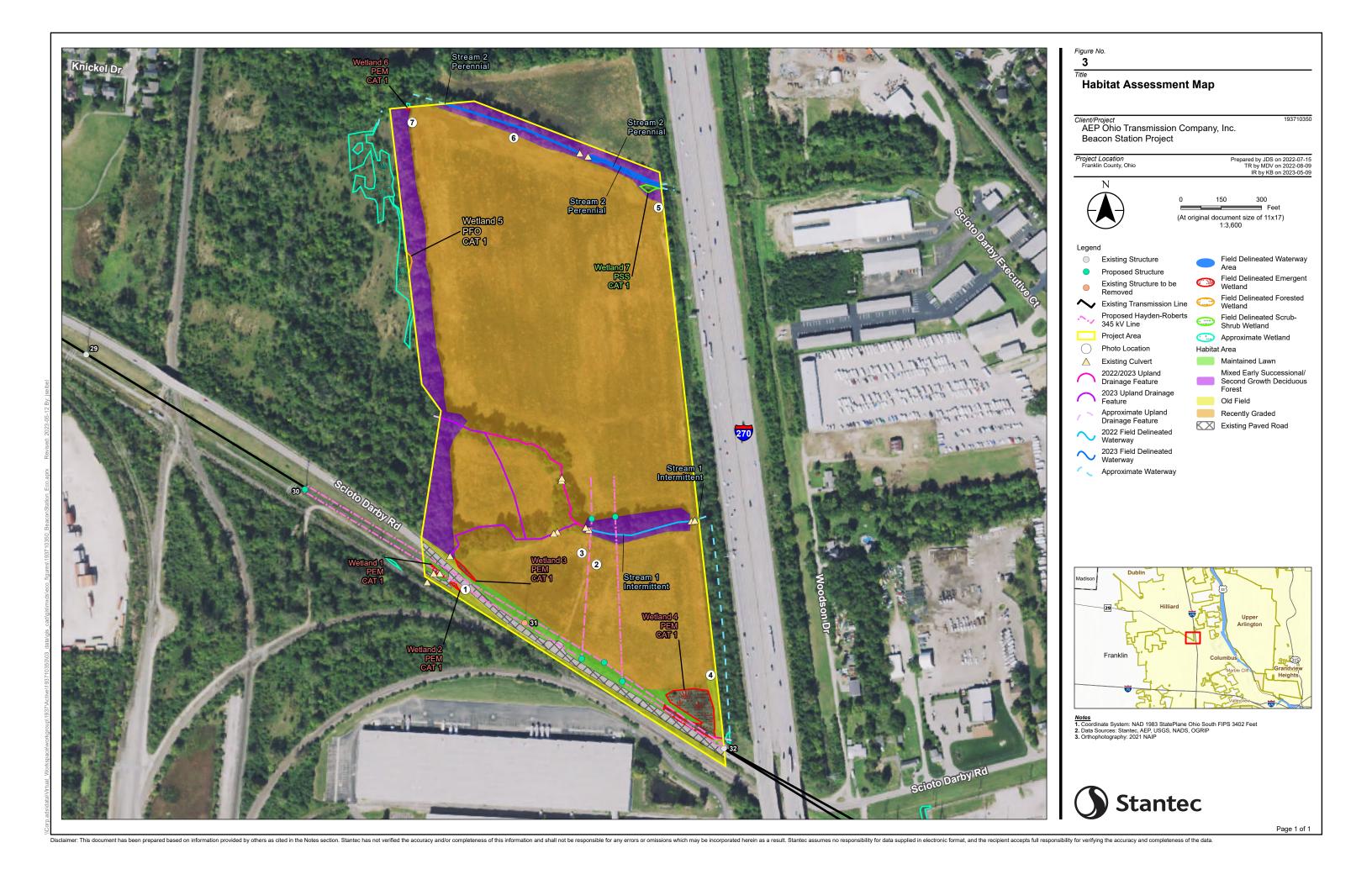
Figures May 12, 2023

## B.2 FIGURE 2 - WETLAND AND WATERBODY DELINEATION MAP



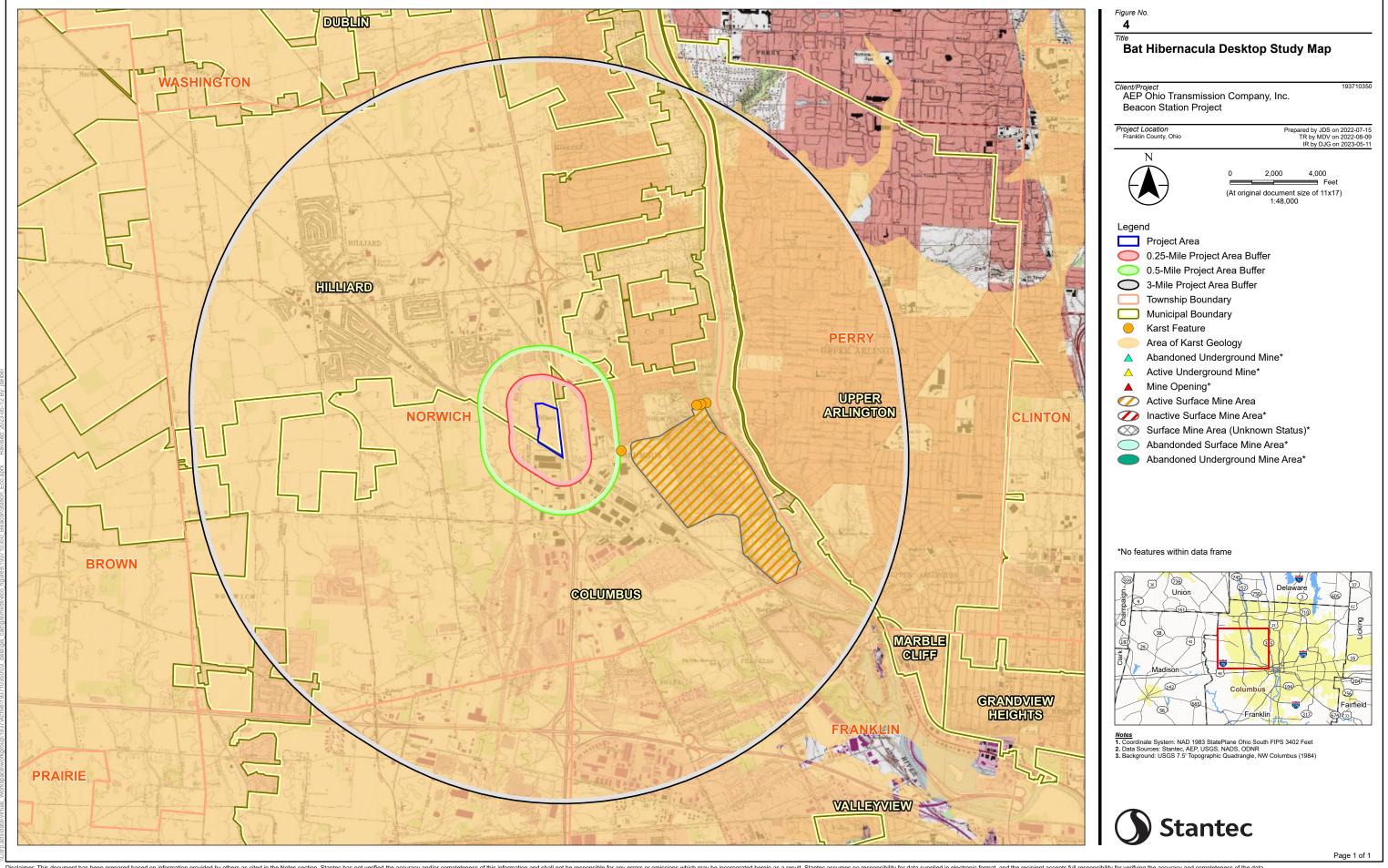
Figures May 12, 2023

# **B.3** FIGURE 3 - HABITAT ASSESSMENT MAP



Figures May 12, 2023

# B.4 FIGURE 4 - HIBERNACULA DESKTOP STUDY MAP



Data Forms May 12, 2023

# Appendix C DATA FORMS

# C.1 WETLAND DETERMINATION DATA FORMS

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Beacon Station Project		City/County: Frankl	lin	Sampling Date:	7/13/22
Applicant/Owner: AEP			State: OH	Sampling Point:	SP01
Investigator(s): Charlie Allen, Samantha Heitzenrater		Section, Township, R	ange: N/A		
Landform (hillside, terrace, etc.): Depression		Local relief	(concave, convex, none):	Concave	
Slope (%): 3 Lat: 40.012941		Long: <u>-83.123961</u>		Datum: WGS84	
Soil Map Unit Name: Udorthents, loamy, steep			NWI classif	fication: N/A	
Are climatic / hydrologic conditions on the site typical for	or this time of yea	ar? Yes X	No (If no, exp	olain in Remarks.)	
Are Vegetation N , Soil N , or Hydrology N ,	significantly distu	rbed? Are "Normal	Circumstances" present?	Yes_X_ No	>
Are Vegetation N , Soil N , or Hydrology N	naturally problem	atic? (If needed, e	explain any answers in Rer	marks.)	
SUMMARY OF FINDINGS – Attach site ma			ocations, transects,	important feat	ures, etc.
Hydrophytic Vegetation Present? Yes X No	o	Is the Sampled	Area		
	o	within a Wetland		No	
	<u> </u>				
Remarks:		-			
Wetland 1 PEM					
L VEGETATION – Use scientific names of pla	ınts.				
		ominant Indicator			
Tree Stratum (Plot size: 30 )	% Cover Sp	pecies? Status	Dominance Test wor		
1			Number of Dominant S Are OBL, FACW, or F	•	1 (A)
3.			Total Number of Domi		<u> </u>
4.		<del></del>	Across All Strata:	mant opecies	1 (B)
5.			Percent of Dominant S	Species That	
	=Tot	al Cover	Are OBL, FACW, or F	AC: 100	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15	)				
1			Prevalence Index wo Total % Cover of		by
] 3			OBL species	x 1 =	by.
4.		<del></del>	FACW species	x 2 =	
5.			FAC species	x 3 =	
	=Tot	al Cover	FACU species	x 4 =	
Herb Stratum (Plot size: 5 )			UPL species	x 5 =	
Typha angustifolia	90	Yes OBL	Column Totals:	(A)	(B)
2.			Prevalence Index =	= B/A =	
3			Hydrophytic Vegetat	ion Indicators:	
5.			X 1 - Rapid Test for		ation
6.		<del></del>	X 2 - Dominance Te		20011
7.			3 - Prevalence Inc		
8.			4 - Morphological	Adaptations <sup>1</sup> (Provi	de supporting
9.			data in Remark	s or on a separate	sheet)
10			Problematic Hydro	ophytic Vegetation <sup>1</sup>	(Explain)
	90 =Tot	al Cover	<sup>1</sup> Indicators of hydric so		
Woody Vine Stratum (Plot size: 15	)		be present, unless dis	turbed or problema	tic.
1			Hydrophytic Vegetation		
	=Tot	al Cover	Present? Yes	X No	
Remarks: (Include photo numbers here or on a separ				<del></del>	
10% bare ground	,				

US Army Corps of Engineers

SOIL Sampling Point: SP01

	cription: (Describe	o the depth				ator or o	confirm the a	bsence o	of indicators	5.)	
Depth	Matrix			x Featur		. 2					
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textu			Remarks	<u> </u>
0-6	10YR 3/1	100					Loamy/C	layey			
6-20	10YR 3/1	97	10YR 5/6	3	С	M	Loamy/C	layey	Promine	nt redox cor	ncentrations
			,								
1			La de la cala NA atriba. N	10. 14				21 4:	DI D	:	4
Hydric Soil	oncentration, D=Depl	etion, RM=R	educed Matrix, N	/IS=Mas	ked Sand	Grains			S FL=Pore Line S For Proble		
Histosol			Sandy Gle	ved Mat	riv (S4)				t Prairie Red	_	ic soils .
	oipedon (A2)		Sandy Red				=		//anganese N		<b>)</b> )
	stic (A3)		Stripped M				-		Parent Mater	-	-)
	n Sulfide (A4)		Dark Surfa		3)		-		Shallow Dark	, ,	22)
	d Layers (A5)		Loamy Mu		eral (F1)		=		· (Explain in f		,
	ick (A10)		Loamy Gle	-			-	_	\	,	
	d Below Dark Surface	(A11)	Depleted N								
Thick Da	ark Surface (A12)		X Redox Dar	k Surfac	ce (F6)		;	3Indicator	s of hydrophy	ytic vegetati	on and
Sandy M	lucky Mineral (S1)		Depleted D	ark Sur	face (F7)	)		wetla	nd hydrology	must be pro	esent,
5 cm Mu	icky Peat or Peat (S3	)	Redox Dep	oression	s (F8)			unles	s disturbed o	or problemat	ic.
Restrictive	Layer (if observed):										
Type:	N/A										
Depth (ii	nches):		_				Hydric Soi	l Present	?	Yes X	No
Remarks:						ı					
HYDROLO	OGY										
	drology Indicators:										
	cators (minimum of o	ne is require							•		f two required)
	Water (A1)		Water-Stai		` '		-		ce Soil Cracl		
	ater Table (A2)		Aquatic Fa	•	•		-		age Patterns		
X Saturation			True Aqua				-		eason Wate		
	larks (B1)		Hydrogen :						ish Burrows ation Visible		2000 (CO)
	nt Deposits (B2) posits (B3)		Oxidized R	•		•	0018 (C3)		ed or Stresse		3 , , ,
	at or Crust (B4)		Recent Iro			,	ls (C6)		norphic Posit	-	· 1)
	posits (B5)		Thin Muck				_		Neutral Test		
	on Visible on Aerial Ir	nagery (B7)	Gauge or \		` '		-			(20)	
	/ Vegetated Concave	0 , ,			, ,						
Field Obser	vations:	`	<u>,                                     </u>		,						
Surface Wat		3	No X	Depth (i	nches):						
Water Table		x X			nches):	8					
Saturation P		3 X			nches):		Wetland	Hydrolog	y Present?	Yes X	No
(includes ca	pillary fringe)				· <del>-</del>				-		
-	corded Data (stream	gauge, mon	itoring well, aeria	l photos	, previou	s inspec	ctions), if avai	lable:			
Remarks:											

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Beacon Station Project		City/Cou	nty: Franklir	1	Sampling Da	nte: 7/13/2	22
Applicant/Owner: AEP				State: OH	Sampling Po	int: SF	P02
Investigator(s): Charlie Allen, Samantha Heitzenrate	r	Section, 1	ownship, Ra	nge: N/A			
Landform (hillside, terrace, etc.): Terrace			Local relief (d	concave, convex, none	e): None		
Slope (%): 0 Lat: 40.012923		Long:	83.123874		Datum: WGS8	4	
Soil Map Unit Name: Udorthents, loamy, steep				NWI clas	ssification: N/A		
Are climatic / hydrologic conditions on the site typica	I for this time o	f year?	Yes X	No (If no,	explain in Remark	s.)	
Are Vegetation N , Soil N , or Hydrology N	significantly d	listurbed? A	Are "Normal C	Circumstances" preser	nt? Yes X	No	
Are Vegetation N , Soil N , or Hydrology N			If needed, ex	plain any answers in f	Remarks.)		•
SUMMARY OF FINDINGS – Attach site i	– map showin	g samplin	g point lo	cations, transect	ts, important f	features,	etc.
Hydrophytic Vegetation Present? Yes	No X	Is the	Sampled A	rea			
	No X	withi	n a Wetlandî	? Yes	No X		
Wetland Hydrology Present? Yes	No X				_		
Remarks: Wetland 1 Upland Point  VEGETATION – Use scientific names of p	Nante						
VEGETATION – Ose scientific flames of p	Absolute	Dominant	Indicator	T T			
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test v	vorksheet:		
1	_			Number of Domina Are OBL, FACW, o		0	(A)
3.				Total Number of Do	_		.(^)
4.				Across All Strata:	ommant Species	2	(B)
5.				Percent of Domina	nt Species That		• ` ′
		Total Cover		Are OBL, FACW, o		0.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15	_)			Prevalence Index	workshoot		
1. 2.				Total % Cover		Itiply by:	
3.				OBL species	0 x 1 =	0	•
4.				FACW species	5 x 2 =	10	
5.				FAC species	0 x 3 =	0	-
	=	Total Cover		FACU species	95 x 4 =	380	-
Herb Stratum (Plot size: 5				UPL species	0 x 5 =	0	_
1. Cichorium intybus	10	No	FACU	Column Totals:	100 (A)		(B)
2. Melilotus officinalis		Yes	FACU	Prevalence Inde	ex = B/A =	3.90	-
3. <u>Cirsium arvense</u>	10	No No	FACU				
4. Ambrosia psilostachya	<u>55</u>	Yes	FACU	Hydrophytic Vege			
5. <u>Cornus alba</u> 6.		No	FACW	2 - Dominance	for Hydrophytic Ve	egetation	
7.	_			3 - Prevalence			
8.					cal Adaptations <sup>1</sup> (F	Provide sup	portina
9.					arks or on a sepai		9
10.				Problematic Hy	ydrophytic Vegetat	tion <sup>1</sup> (Expla	in)
Woody Vine Stratum (Plot size: 15	100 =	Total Cover		<sup>1</sup> Indicators of hydribe present, unless			must
1.	_'			, ,	distance of propi	omatio.	
2.				Hydrophytic Vegetation			
		Total Cover		_	es No	Χ	
Remarks: (Include photo numbers here or on a seg	parate sheet.)			<u>I</u>			
, , ,	,						

US Army Corps of Engineers

SOIL Sampling Point: SP02

Depth		o the depth				tor or c	onfirm the absence o	f indicators.)
-	Matrix			ox Featur		12	T 4	Davisada
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-20	10YR 4/4	60					Loamy/Clayey	Roadway fill
	10YR 3/1	40						Roadway fill
<sup>1</sup> Type: C=C	oncentration, D=Deple	etion RM=Re	duced Matrix	MS=Mas	ked Sand	Grains	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil		54011, 1 4VI 1 4C	adood Mainx,	ivio ivido	Rou Guile	Oranio.		for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Gl	eyed Mat	rix (S4)			Prairie Redox (A16)
	pipedon (A2)		Sandy Re	-				anganese Masses (F12)
Black Hi	stic (A3)		Stripped I	Matrix (S	3)		Red P	arent Material (F21)
Hydroge	en Sulfide (A4)		Dark Surf	ace (S7)			Very S	Shallow Dark Surface (F22)
Stratified	d Layers (A5)		Loamy Mi	ucky Min	eral (F1)		Other	(Explain in Remarks)
	ıck (A10)		Loamy Gl	•	, ,			
	d Below Dark Surface	(A11)	Depleted	•	•		2	
	ark Surface (A12)		Redox Da		` '			of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted		, ,			d hydrology must be present,
5 cm Mu	ucky Peat or Peat (S3)		Redox De	pression	s (F8)		unless	disturbed or problematic.
	Layer (if observed):							
Type:	N/A							
Depth (ir	nches):						Hydric Soil Present	Yes No X
HYDROLC	OGY							
Wetland Hy								
	drology Indicators:							
	cators (minimum of or	ne is required						/ Indicators (minimum of two required)
Surface	cators (minimum of or Water (A1)	ne is required	Water-Sta	ained Lea	, ,		Surfac	e Soil Cracks (B6)
Surface High Wa	cators (minimum of or Water (A1) ater Table (A2)	ne is required	Water-Sta	ained Lea auna (B1	3)		Surface Draina	ee Soil Cracks (B6) ge Patterns (B10)
Surface High Wa	cators (minimum of or Water (A1) ater Table (A2) on (A3)	ne is required	Water-Sta Aquatic F True Aqua	ained Lea auna (B1 atic Plant	3) ts (B14)		Surfac Draina Dry-So	e Soil Cracks (B6) age Patterns (B10) eason Water Table (C2)
Surface High Wa Saturatio Water M	cators (minimum of or Water (A1) ater Table (A2) on (A3) larks (B1)	ne is required	Water-Sta Aquatic F True Aqua Hydrogen	ained Lea auna (B1 atic Plant Sulfide (	3) s (B14) Odor (C1)		Surfac Draina Dry-Sı Crayfı	se Soil Cracks (B6) uge Patterns (B10) eason Water Table (C2) sh Burrows (C8)
Surface High Wa Saturatio Water M Sedimer	cators (minimum of or Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2)	ne is required	Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph	3) s (B14) Odor (C1) seres on L	iving Ro	Surface Draina Dry-Se Crayfi  Satura	se Soil Cracks (B6) sige Patterns (B10) season Water Table (C2) sh Burrows (C8) stion Visible on Aerial Imagery (C9)
Surface High Wa Saturatio Water M Sedimer Drift Dep	cators (minimum of or Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3)	ne is required	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Redu	3) cs (B14) Odor (C1) deres on L ced Iron (	iving Ro	Surface	the Soil Cracks (B6) age Patterns (B10) the ason Water Table (C2) this Burrows (C8) thion Visible on Aerial Imagery (C9) and or Stressed Plants (D1)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) ont Deposits (B2) posits (B3) at or Crust (B4)	ne is required	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1) heres on L ced Iron ( ction in Til	iving Ro	Surface	the Soil Cracks (B6) age Patterns (B10) the Burrows (C8) thich Visible on Aerial Imagery (C9) and or Stressed Plants (D1) torphic Position (D2)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	cators (minimum of or Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc & Surface	3) cs (B14) Odor (C1) neres on L ced Iron ( ction in Til e (C7)	iving Ro	Surface	the Soil Cracks (B6) age Patterns (B10) the ason Water Table (C2) this Burrows (C8) thion Visible on Aerial Imagery (C9) and or Stressed Plants (D1)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep	cators (minimum of or Water (A1) ater Table (A2) on (A3) darks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	nagery (B7)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc & Surface Well Dat	3) Is (B14) Odor (C1) Ineres on L Ced Iron ( Cation in Till E (C7) Ita (D9)	iving Ro	Surface	the Soil Cracks (B6) age Patterns (B10) the Burrows (C8) thich Visible on Aerial Imagery (C9) and or Stressed Plants (D1) torphic Position (D2)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep	cators (minimum of or Water (A1) ater Table (A2) on (A3) darks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial Im	nagery (B7)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iro Thin Mucl Gauge or	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc & Surface Well Dat	3) Is (B14) Odor (C1) Ineres on L Ced Iron ( Cation in Till E (C7) Ita (D9)	iving Ro	Surface	the Soil Cracks (B6) age Patterns (B10) the Burrows (C8) thich Visible on Aerial Imagery (C9) and or Stressed Plants (D1) torphic Position (D2)
Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely	cators (minimum of or Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial Im y Vegetated Concave	nagery (B7) Surface (B8)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iro Thin Mucl Gauge or	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc c Surface Well Dat plain in F	3) Is (B14) Odor (C1) Ineres on L Ced Iron ( Cation in Till E (C7) Ita (D9)	iving Ro	Surface	the Soil Cracks (B6) age Patterns (B10) the Burrows (C8) thich Visible on Aerial Imagery (C9) and or Stressed Plants (D1) torphic Position (D2)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely	cators (minimum of or Water (A1) ater Table (A2) on (A3) darks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial Im y Vegetated Concave rvations: ter Present? Yes	nagery (B7) Surface (B8)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl Gauge or Other (Ex	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc c Surface Well Dat plain in F	ss (B14) Odor (C1) heres on L ced Iron ( ction in Til e (C7) ha (D9) Remarks)	iving Ro C4) led Soils	Surface	the Soil Cracks (B6) age Patterns (B10) the Burrows (C8) thich Visible on Aerial Imagery (C9) and or Stressed Plants (D1) torphic Position (D2)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat	cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial Im y Vegetated Concave rvations: ter Present? Yes	nagery (B7) Surface (B8)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized I Presence Recent Ird Thin Mucl Gauge or Other (Ex	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc c Surface Well Dat plain in F	ss (B14) Codor (C1) Deres on L Ced Iron ( Ction in Til E (C7) Ia (D9) Remarks)	iving Ro	Surface	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) psh Burrows (C8) attion Visible on Aerial Imagery (C9) and or Stressed Plants (D1) porphic Position (D2) deutral Test (D5)
Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial Im y Vegetated Concave rvations: ter Present? Present? Yes pillary fringe)	nagery (B7) Surface (B8)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized I Presence Recent Iru Thin Mucl Gauge or Other (Ex	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc or Surface Well Dat plain in F Depth (i Depth (i	3) Is (B14) Odor (C1) Interes on Leced Iron (C1) Ista (D9) Remarks) Inches): Inches	iving Ro	Surface Draina Dry-Si Crayfi Sotts (C3) Satura Stunte S (C6) FAC-N  Wetland Hydrolog	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) psh Burrows (C8) attion Visible on Aerial Imagery (C9) and or Stressed Plants (D1) porphic Position (D2) deutral Test (D5)
Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial Im y Vegetated Concave rvations: ter Present? Yes Present? Yes	nagery (B7) Surface (B8)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized I Presence Recent Iru Thin Mucl Gauge or Other (Ex	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc or Surface Well Dat plain in F Depth (i Depth (i	3) Is (B14) Odor (C1) Interes on Leced Iron (C1) Ista (D9) Remarks) Inches): Inches	iving Ro	Surface Draina Dry-Si Crayfi Sotts (C3) Satura Stunte S (C6) FAC-N  Wetland Hydrolog	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) psh Burrows (C8) attion Visible on Aerial Imagery (C9) and or Stressed Plants (D1) porphic Position (D2) deutral Test (D5)
Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Wat Water Table Saturation P (includes cal Describe Re	cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial Im y Vegetated Concave rvations: ter Present? Present? Yes pillary fringe)	nagery (B7) Surface (B8)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized I Presence Recent Iru Thin Mucl Gauge or Other (Ex	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc or Surface Well Dat plain in F Depth (i Depth (i	3) Is (B14) Odor (C1) Interes on Leced Iron (C1) Ista (D9) Remarks) Inches): Inches	iving Ro	Surface Draina Dry-Si Crayfi Sotts (C3) Satura Stunte S (C6) FAC-N  Wetland Hydrolog	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) psh Burrows (C8) attion Visible on Aerial Imagery (C9) and or Stressed Plants (D1) porphic Position (D2) deutral Test (D5)
Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial Im y Vegetated Concave rvations: ter Present? Present? Yes pillary fringe)	nagery (B7) Surface (B8)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized I Presence Recent Iru Thin Mucl Gauge or Other (Ex	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc or Surface Well Dat plain in F Depth (i Depth (i	3) Is (B14) Odor (C1) Interes on Leced Iron (C1) Ista (D9) Remarks) Inches): Inches	iving Ro	Surface Draina Dry-Si Crayfi Sotts (C3) Satura Stunte S (C6) FAC-N  Wetland Hydrolog	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) psh Burrows (C8) attion Visible on Aerial Imagery (C9) and or Stressed Plants (D1) porphic Position (D2) deutral Test (D5)

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Beacon Station Project		City/Cou	nty: Franklir	1	Sampling Dat	te: <u>7/13/</u>	/22
Applicant/Owner: AEP				State: OH	Sampling Poi	nt: S	SP03
Investigator(s): Charlie Allen		Section, T	ownship, Ra	nge: N/A			
Landform (hillside, terrace, etc.): Depression			Local relief (d	concave, convex, none):	Concave		
Slope (%): 3 Lat: 40.012848		Long: -	83.123814		Datum: WGS84	1	
Soil Map Unit Name: Kokomo silty clay loam, 0-2% slo	opes	_		NWI classif	fication: N/A		
Are climatic / hydrologic conditions on the site typical	for this time o	f year?	Yes X	No (If no, exp	olain in Remarks	3.)	
Are Vegetation N , Soil N , or Hydrology N	significantly of	listurbed? A	Are "Normal (	Circumstances" present?	Yes X	No	
Are Vegetation N , Soil N , or Hydrology N	naturally prob	olematic? (	If needed, ex	plain any answers in Rer	marks.)		_
SUMMARY OF FINDINGS – Attach site m			g point lo	cations, transects,	important f	eatures	, etc.
Hydrophytic Vegetation Present? Yes X N	lo	Is the	Sampled A	rea			
	lo		n a Wetland'		No		
Wetland Hydrology Present? Yes X N	lo						
Remarks:		<u>-</u>					
Wetland 2 PEM							
VEGETATION – Use scientific names of pla		Daminant	lu di a atau	1			
Tree Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	rksheet:		
1				Number of Dominant	Species That		
2.				Are OBL, FACW, or F	AC:	1	(A)
3.				Total Number of Dom	inant Species		
4				Across All Strata:	_	1	_(B)
5		=Total Cover		Percent of Dominant S Are OBL, FACW, or F	•	100.0%	(A/R)
Sapling/Shrub Stratum (Plot size: 15	, ——	- Total Covel		Ale OBE, I ACW, OI I		100.070	_(^/D)
1.	,'			Prevalence Index wo	orksheet:		
2.				Total % Cover of	: Mulf	tiply by:	
3.				OBL species	x 1 =		_
4				FACW species	x 2 =		_
5				FAC species	x 3 =		_
(B) ( )	=	=Total Cover		FACU species	x 4 = _		_
Herb Stratum (Plot size: 5 )	90	Vaa	OBL	UPL species	x 5 =		_ (D)
Typha angustifolia     Z.	80	Yes	OBL	Column Totals:  Prevalence Index :			_(B)
3.				Trevalence index	- 6/A -		-
4.				Hydrophytic Vegetat	ion Indicators:		
5.				X 1 - Rapid Test for			
6.				X 2 - Dominance Te	est is >50%		
7				3 - Prevalence Inc	dex is ≤3.0 <sup>1</sup>		
8				4 - Morphological			
9					s or on a separ	,	
10		T-4-1 0		Problematic Hydro			•
Woody Vine Stratum (Plot size: 15	=	=Total Cover		<sup>1</sup> Indicators of hydric so be present, unless dis			must
	,)			•	turbed or proble	mauc.	
1. 2.				Hydrophytic Vegetation			
		Total Cover		Present? Yes	X No		
Remarks: (Include photo numbers here or on a sepa				<u> </u>			
20% bare ground							

US Army Corps of Engineers

SOIL Sampling Point: SP03

Profile Descripe Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-20	10YR 4/2	75	10YR 5/8	25	<u>.урс</u> С	M	Loamy/Clayey	rtomanto	
0-20	10111 4/2	10	10111 3/0			171	Loanly/Olaycy		
	-								
<sup>1</sup> Type: C=Co	ncentration, D=Dep	letion, RM	=Reduced Matrix, I	MS=Mas	ked Sand	d Grains	. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix	(.
Hydric Soil Ir								s for Problematic Hydric S	
Histosol (	(A1)		Sandy Gle	eyed Mat	rix (S4)		Coast	Prairie Redox (A16)	
Histic Epi	ipedon (A2)		Sandy Re	dox (S5)			Iron-M	langanese Masses (F12)	
Black His	stic (A3)		Stripped N	/latrix (Se	3)		Red F	arent Material (F21)	
Hydrogen	n Sulfide (A4)		Dark Surfa	ace (S7)			Very S	Shallow Dark Surface (F22)	)
Stratified	Layers (A5)		Loamy Mu	•	, ,		Other	(Explain in Remarks)	
2 cm Muc	, ,		Loamy Gle						
	Below Dark Surface	e (A11)	X Depleted I	Matrix (F	3)		_		
	rk Surface (A12)		Redox Da		` '			of hydrophytic vegetation	
	ucky Mineral (S1)		Depleted I		, ,			nd hydrology must be prese	ent,
5 cm Mud	cky Peat or Peat (S	3)	Redox De	pression	s (F8)		unless	s disturbed or problematic.	
Restrictive L	.ayer (if observed):								
T	A1/A								
Type:	N/A								
Depth (inc			_				Hydric Soil Present	? Yes	No
Depth (ind Remarks:	ches):						Hydric Soil Present	? Yes	No
Depth (ind Remarks:	ches):						Hydric Soil Present	? Yes	No
Depth (ind Remarks: HYDROLOG Wetland Hyd	GY Irology Indicators:								
Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indica	GY Irology Indicators: ators (minimum of c	one is requi			(00)		<u>Secondar</u>	y Indicators (minimum of tw	
Depth (incomplete property)  Remarks:  HYDROLOG  Wetland Hyd  Primary Indicat  Surface V	GY Irology Indicators: ators (minimum of c	one is requi	Water-Sta	ined Lea			Secondar Surfac	y Indicators (minimum of tw ce Soil Cracks (B6)	
Depth (incomplete in the control of	GY Irology Indicators: ators (minimum of control (A1) ter Table (A2)	one is requi	Water-Sta	ined Lea auna (B1	3)		Secondar Surfac Draina	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10)	
Depth (incomplete in the complete in the compl	GY Irology Indicators: ators (minimum of control (A1) ter Table (A2) n (A3)	one is requi	Water-Sta Aquatic Fa True Aqua	nined Lea auna (B1 atic Plant	3) s (B14)		Secondar Surfac Draina Dry-S	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2)	
Depth (incomplete property)  HYDROLOG  Wetland Hyd  Primary Indication  Surface V  High Water  X Saturation  Water Ma	GY Irology Indicators: ators (minimum of control (A1) er Table (A2) n (A3) arks (B1)	one is requi	Water-Sta Aquatic Fa True Aqua Hydrogen	nined Lea auna (B1 atic Plant Sulfide (	3) s (B14) Odor (C1)		Secondar Surfac Draina Dry-S	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8)	o required
Depth (incomplete in the complete in the compl	GY Irology Indicators: ators (minimum of control of the control of	one is requi	Water-Sta Aquatic Fa True Aqua	nined Lea auna (B1 atic Plant Sulfide ( Rhizosph	3) s (B14) Odor (C1) eres on l	_iving Ro	Secondar Surfac Draina Dry-S Crayfi	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imag	o required
Depth (incomplete property)  Remarks:  HYDROLOG  Wetland Hyd  Primary Indicates  Surface V  High Water  X Saturation  Water Mater  Sediment  Drift Depo	GY Irology Indicators: ators (minimum of control of the control of	one is requi	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	nined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1) eres on l ced Iron (	Living Ro	Secondar Surfac Draina Dry-S Crayfi Dots (C3) Satura	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8)	o required
Depth (incomplete property)  Remarks:  HYDROLOG  Wetland Hyd  Primary Indicates  Surface V  High Water  X Saturation  Water Mater  Sediment  Drift Depo	GY Irology Indicators: ators (minimum of control of con	one is requi	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	nined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1) eres on I ced Iron (	Living Ro	Secondary   Surfact	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imaged or Stressed Plants (D1)	o required
Depth (incomplete in the complete in the compl	GY Irology Indicators: ators (minimum of control of con		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	uined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface	3) s (B14) Odor (C1) eres on l ced Iron ( ction in Ti	Living Ro	Secondary   Surfact	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imaged or Stressed Plants (D1) orphic Position (D2)	o required
Depth (incomplete in the complete in the compl	GY  Irology Indicators: ators (minimum of control (Mater (A1)) iter Table (A2) in (A3) arks (B1) it Deposits (B2) it Deposits (B3) it or Crust (B4) it Desits (B5)	magery (B.	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	uined Lea auna (B1 Sulfide ( Rhizosph of Reduc on Reduc ( Surface Well Dat	3) s (B14) Odor (C1) eres on I ced Iron ( ction in Ti e (C7) a (D9)	Living Ro	Secondary   Surfact	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imaged or Stressed Plants (D1) orphic Position (D2)	o required
Depth (incomplete in the complete in the compl	GY  Irology Indicators: ators (minimum of control of co	magery (B.	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	uined Lea auna (B1 Sulfide ( Rhizosph of Reduc on Reduc ( Surface Well Dat	3) s (B14) Odor (C1) eres on I ced Iron ( ction in Ti e (C7) a (D9)	Living Ro	Secondary   Surfact	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imaged or Stressed Plants (D1) orphic Position (D2)	o required
Depth (incomplete in the complete in the compl	GY Irology Indicators: ators (minimum of	magery (Bī	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	uined Lea auna (B1 Sulfide ( Rhizosph of Reduc on Reduc ( Surface Well Dat	3) s (B14) Odor (C1) eres on l ced Iron ( ction in Ti e (C7) a (D9) Remarks)	Living Ro	Secondary   Surfact	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imaged or Stressed Plants (D1) orphic Position (D2)	o required
Depth (incomplete in the complete in the compl	GY  Irology Indicators: ators (minimum of control of co	magery (Bi	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck Gauge or Other (Exp	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc s Surface Well Dat	3) s (B14) Odor (C1) eres on I ced Iron ( tition in Ti e (C7) a (D9) Remarks)	Living Ro	Secondary   Surfact	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imaged or Stressed Plants (D1) orphic Position (D2)	o required
Depth (incomplete in the complete in the compl	GY  Irology Indicators: ators (minimum of content of co	magery (Bi	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Ird Thin Muck Gauge or Other (Exp	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc c Surface Well Dat Depth (i	3) s (B14) Ddor (C1) eres on I ced Iron ( tition in Ti e (C7) a (D9) Remarks) nches): _ nches): _	Living Ro	Secondary   Surfact	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imaged or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)	o required
Pepth (inc Remarks:  HYDROLOG  Wetland Hyd Primary Indica Surface W High Water X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely  Field Observ Surface Water Water Table F Saturation Pre (includes capi	GY  Irology Indicators: ators (minimum of control of co	magery (B) Surface (I	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc on Surface Well Dat plain in F Depth (i Depth (i	3) s (B14) Odor (C1) eres on I ced Iron ( tition in Ti c (C7) a (D9) Remarks) nches): _ nches): _ nches): _	Living Ro (C4) Illed Soil	Secondarion Surface Surface Surface Dry-S Crayfic Stunte S	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imaged or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)	o required
Pepth (inc Remarks:  HYDROLOG  Wetland Hyd Primary Indica Surface W High Water X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely  Field Observ Surface Water Water Table F Saturation Pre (includes capi	GY  Irology Indicators: ators (minimum of content of co	magery (B) Surface (I	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc on Surface Well Dat plain in F Depth (i Depth (i	3) s (B14) Odor (C1) eres on I ced Iron ( tition in Ti c (C7) a (D9) Remarks) nches): _ nches): _ nches): _	Living Ro (C4) Illed Soil	Secondarion Surface Surface Surface Dry-S Crayfic Stunte S	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imaged or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)	o required
Pepth (inc Remarks:  HYDROLOG  Wetland Hyd Primary Indica Surface W High Water X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely  Field Observ Surface Water Water Table F Saturation Pre (includes capi	GY  Irology Indicators: ators (minimum of control of co	magery (B) Surface (I	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or Other (Exp No X No X No X	ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc on Surface Well Dat plain in F Depth (i Depth (i	3) s (B14) Odor (C1) eres on I ced Iron ( tition in Ti c (C7) a (D9) Remarks) nches): _ nches): _ nches): _	Living Ro (C4) Illed Soil	Secondarion Surface Surface Surface Dry-S Crayfic Stunte S	y Indicators (minimum of two ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imaged or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)	o required

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Beacon Station Project		City/Cou	ınty: Frankliı	า	Sampling Da	ate: 7/13	3/22
Applicant/Owner: AEP				State: OH	Sampling Po	oint:	SP04
Investigator(s): Charlie Allen, Samantha Heitzenrater	•	Section, 1	Гownship, Ra	inge: N/A	<u> </u>		
Landform (hillside, terrace, etc.): Terrace			Local relief (	concave, convex, none)	None		
Slope (%): 0 Lat: 40.01291		Long:	83.123815		Datum: WGS8	34	
Soil Map Unit Name: Kokomo silty clay loam, 0-2% s	slopes			NWI class	ification: N/A		
Are climatic / hydrologic conditions on the site typica	I for this time o	f year?	Yes X	No (If no, ex	φlain in Remark	(s.)	
Are Vegetation N , Soil N , or Hydrology N	significantly of	disturbed? A	Are "Normal (	Circumstances" present	? Yes X	No	
Are Vegetation N , Soil N , or Hydrology N	_ _naturally prob	olematic? (	(If needed, ex	xplain any answers in Re	emarks.)		_
SUMMARY OF FINDINGS – Attach site r	– nap showir	ng samplin	g point lo	cations, transects	, important	features	s, etc.
Hydrophytic Vegetation Present? Yes	No X	Is the	Sampled A	rea			
	No X	withi	n a Wetland	? Yes	No X		
Wetland Hydrology Present? Yes	No X						
Remarks: Wetland 2 Upland Point		-					
Wetland 2 Opiand 1 Oint							
<b>VEGETATION</b> – Use scientific names of p	lants.						
	Absolute	Dominant	Indicator				
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test wo	orksheet:		
1. 2.				Number of Dominan Are OBL, FACW, or	•	1	<b>(A)</b>
2					-	'	_ (A)
4.				Total Number of Dor Across All Strata:	ninant Species	3	(B)
5.				Percent of Dominant	Species That		_` ′
		=Total Cover		Are OBL, FACW, or		33.3%	(A/B)
Sapling/Shrub Stratum (Plot size: 15	_)						
1.				Prevalence Index w			
2. 3.				Total % Cover of OBL species	$\frac{\text{of:}}{0} \frac{\text{Mu}}{\text{x 1 =}}$	ıltiply by: 0	_
					0	0	_
5.				· -	40 x 3 =	120	_
		=Total Cover		· -	80 x 4 =	320	_
Herb Stratum (Plot size: 5 )				UPL species	0 x 5 =	0	_
1. Erigeron annuus	15	No	FACU	Column Totals: 1	20 (A)	440	(B)
2. Melilotus officinalis	10	No	FACU	Prevalence Index	= B/A =	3.67	
3. Cichorium intybus	10	No	FACU				
4. Plantago lanceolata		Yes	FACU	Hydrophytic Vegeta			
5. Festuca rubra		Yes	FACU	1 - Rapid Test fo		egetation	
6. Oenothera parviflora	5	No	FACU	2 - Dominance T			
7. <u>Poa pratensis</u> 8.	40	Yes	<u>FAC</u>	3 - Prevalence II 4 - Morphologica		Dravida au	nnartina
8. 9.					rks or on a sepa		
10.				Problematic Hyd	•		•
	120	=Total Cover		<sup>1</sup> Indicators of hydric			
Woody Vine Stratum (Plot size: 15	)			be present, unless d		, ,,	muot
1.				Hydrophytic			
2.				Vegetation			
		=Total Cover	_	Present? Yes	No_	X	
Remarks: (Include photo numbers here or on a sep	parate sheet.)			-			

US Army Corps of Engineers

SOIL Sampling Point: SP04

	cription: (Describe t	to the depth				tor or o	confirm the	absence of in	dicators.)	
Depth	Matrix	0/		x Featur		12	T 4		Damada	
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Text		Remarks	
0-8	10YR 4/3	100					Loamy/	Clayey	Fill	
	oncentration, D=Depl	etion, RM=Re	duced Matrix, N	/IS=Mas	ked Sand	d Grains			.=Pore Lining, M=Mat	
Hydric Soil					. (0.1)				r Problematic Hydri	c Soils":
Histosol			Sandy Gle						airie Redox (A16)	
	pipedon (A2)		Sandy Red	, ,					ganese Masses (F12)	)
Black Hi	` '		Stripped M		5)				nt Material (F21)	10)
	n Sulfide (A4)		Dark Surfa		oral (F1)				llow Dark Surface (F2	22)
	d Layers (A5) ick (A10)		Loamy Mu Loamy Gle	•	. ,			Other (Ex	plain in Remarks)	
	d Below Dark Surface	(Δ11)	Depleted N							
	ark Surface (A12)	(7.11)	Redox Dai	,	,			<sup>3</sup> Indicators of	hydrophytic vegetatio	on and
l ——	fucky Mineral (S1)		Depleted [		` '				ydrology must be pre	
	icky Peat or Peat (S3	)	Redox Dep		, ,				sturbed or problemati	
		,			- ()					
Type:	Layer (if observed): Road fill									
Depth (ir		8	-				Hydric Sc	oil Present?	Yes	No X
Remarks:		0	•				Tiyane oc	, resenti		
HYDROLC	OGY									
Wetland Hy	drology Indicators:									
Primary Indi	cators (minimum of o	ne is required	; check all that	apply)				Secondary Inc	dicators (minimum of	two required)
Surface	Water (A1)		Water-Sta	ined Lea	ives (B9)			Surface S	oil Cracks (B6)	
	iter Table (A2)		Aquatic Fa	•	,				Patterns (B10)	
Saturation			True Aqua						on Water Table (C2)	
	larks (B1)		Hydrogen						Burrows (C8)	
	nt Deposits (B2)		Oxidized F			•	oots (C3)		n Visible on Aerial Im	0 , ( ,
	posits (B3)		Presence		`	,	(00)		r Stressed Plants (D	1)
	at or Crust (B4)		Recent Iro			lled Soil	s (C6)		hic Position (D2)	
	oosits (B5)	(DZ)	Thin Muck		` '			FAC-Neur	tral Test (D5)	
	on Visible on Aerial In Vegetated Concave	0 , , ,	Gauge or \ Other (Exp		` '					
		Surface (Do)	Other (Exp	naiii iii r	(emarks)		1			
Field Obser		_	No. V	Donth (i	nahaa\.					
Surface Wat Water Table		<u> </u>			nches): _					
Saturation P		s			nches): _ nches):		Wotland	d Hydrology P	resent? Yes	No X
	pillary fringe)	· <u> </u>	NO_X	Deptii (i			VVetiand	a riyarology F		
	corded Data (stream	gauge monit	oring well aeria	l photos	previous	s inspec	tions) if ava	ailable.		
Describe IVE	oo. ada Data (Siream	gaago, monit	omig won, aona	p.10103	, proviou	э шороо	,, II ave	anabio.		
Remarks:										

Project/Site: Beacon Station Project		City/Cou	nty: Franklir	า	Sampling Dat	te: <u>7/13/</u>	/22
Applicant/Owner: AEP				State: OH	Sampling Poi	nt: S	P05
Investigator(s): Charlie Allen, Samantha Heitzenrater		Section, T	ownship, Ra	nge: N/A			
Landform (hillside, terrace, etc.): Depression			Local relief (	concave, convex, none):	Concave		
Slope (%): 1 Lat: 40.012927		Long: -	83.12357		Datum: WGS84	1	
Soil Map Unit Name: Kokomo silty clay loam, 0-2% slo	opes			NWI classi	fication: N/A		
Are climatic / hydrologic conditions on the site typical f	for this time o	f year?	Yes X	No (If no, ex	plain in Remarks	 s.)	
Are Vegetation N , Soil N , or Hydrology N	significantly d	isturbed? A	re "Normal (	Circumstances" present?	Yes X	No	
Are Vegetation N , Soil N , or Hydrology N	naturally prob	lematic? (	If needed, ex	plain any answers in Re	marks.)		_
SUMMARY OF FINDINGS – Attach site m	ap showin	g samplin	g point lo	cations, transects	, important f	eatures.	, etc.
	o		Sampled A		No		
Remarks: Wetland 3 PEM		•					
VEGETATION – Use scientific names of pla	ants.						
<u>Tree Stratum</u> (Plot size: 30 )	Absolute % Cover	Dominant	Indicator Status	Dominance Test wo	wka ba a tu		
<u>Tree Stratum</u> (Plot size: <u>30</u> )  1  2		Species?	Status	Number of Dominant Are OBL, FACW, or I	Species That	2	(A)
3. 4.				Total Number of Dom Across All Strata:		2	<b>-</b> ` ′ (B)
5.		Total Cover		Percent of Dominant Are OBL, FACW, or I		100.0%	_ (A/B)
Sapling/Shrub Stratum (Plot size: 15	)						
1.				Prevalence Index w		limber heer	
2. 3.				Total % Cover o OBL species	x 1 =	tiply by:	_
4.	· ·			FACW species	x 2 =		-
5.				FAC species	x 3 =		_
	=	Total Cover		FACU species	x 4 =		_
Herb Stratum (Plot size: 5 )				UPL species	x 5 =		_
Typha angustifolia	40	Yes	OBL	Column Totals:	(A)		_(B)
2. Eleocharis acicularis	50	Yes	OBL	Prevalence Index	= B/A =		_
3. 4.				Hydrophytic Vegeta	tion Indicators:		
5.				X 1 - Rapid Test for			
6.				X 2 - Dominance To		90	
7.				3 - Prevalence In			
8.				4 - Morphological			
9					ks or on a separa	,	
10		<del></del>		Problematic Hydi			-
Woody Vine Stratum (Plot size: 15	90 =	Total Cover		<sup>1</sup> Indicators of hydric s be present, unless dis			must
1. 2.				Hydrophytic			
		Total Cover		Vegetation Present? Yes	X No		
Remarks: (Include photo numbers here or on a sepa		. 5.6. 50701		1.000			
10% bare ground	11 atc 311661.)						

US Army Corps of Engineers

SOIL Sampling Point: SP05

	ription: (Describe t	o the depth				ator or o	confirm the al	osence of indic	cators.)	
Depth	Matrix			x Featur	-	. 1				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textur	e	Remarks	
0-12	10YR 4/1	93	10YR 6/6	7	С	M	Loamy/Cla	ayey		
							•			_
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM=R	educed Matrix, I	MS=Mas	ked Sand	d Grains			ore Lining, M=Matr	
Hydric Soil I							lı		roblematic Hydric	Soils <sup>3</sup> :
Histosol (			Sandy Gle	-					e Redox (A16)	
	ipedon (A2)		Sandy Re	, ,			_		ese Masses (F12)	
Black His	, ,		Stripped N	•	6)		_		Material (F21)	
	n Sulfide (A4)		Dark Surfa				_		v Dark Surface (F2	2)
	Layers (A5)		Loamy Mu	-			_	Other (Expla	in in Remarks)	
2 cm Mud	` '		Loamy Gle	-						
	Below Dark Surface	(A11)	X Depleted I	•	•		2.			
	rk Surface (A12)		Redox Da		, ,		។	-	drophytic vegetation	
	ucky Mineral (S1)		Depleted I		, ,	1		-	rology must be pres	
	cky Peat or Peat (S3	)	Redox De	pression	s (F8)			uniess distur	bed or problemation	•
	.ayer (if observed):									
Type:	Roadway		_					_		
Depth (in	ches):	12	=				Hydric Soil	Present?	Yes	No
LIVEROL O	<b>0</b> 1/									
HYDROLO										
_	Irology Indicators:									
	ators (minimum of o	ne is required					<u>S</u>		ators (minimum of t	wo required)
	Water (A1)		Water-Sta		` '		_	Surface Soil		
	ter Table (A2)		Aquatic Fa	•	,		_	Drainage Pa	` '	
Saturatio			True Aqua		,		_		Water Table (C2)	
Water Ma			Hydrogen		, ,			Crayfish Bur		
	t Deposits (B2)		Oxidized F			•	oots (C3)		isible on Aerial Ima	. ,
	osits (B3)		Presence		,	,	- (C6)		tressed Plants (D1 Position (D2)	)
Iron Depo	t or Crust (B4)		Recent Iro			ileu Soii		X FAC-Neutral	` '	
	n Visible on Aerial In	nagery (R7)	Gauge or				<u></u>	A rAC-Neutral	rest (D3)	
	Vegetated Concave				. ,					
Field Observ					- Corrianto)					
Surface Water		2	No X	Denth (i	nches):					
Water Table		<u> </u>	No X		nches):					
Saturation Pr		<u> </u>	No X		nches):		Wetland H	Hydrology Pres	ent? Yes X	No
(includes cap			<u>//</u>	2 op (.	_			.,	<u></u>	
	corded Data (stream	gauge, moni	toring well, aeria	al photos	, previous	s inspec	tions), if availa	able:		
	<u> </u>	· · · · · · · · · · · · · · · · ·	<del>-</del> ,		·	·				
Remarks:										

Project/Site: Beacon Station Project		City/Cou	ınty: Franklir	า	Sampling Da	ate: <u>7/13</u>	3/22
Applicant/Owner: AEP				State: OH	Sampling Po	oint:	SP06
Investigator(s): Charlie Allen, Samantha Heitzenrater		Section, 7	Гownship, Ra	inge: N/A			
Landform (hillside, terrace, etc.): Depression			Local relief (d	concave, convex, none	e): Concave		
Slope (%): 2 Lat: 40.0129		Long:	83.123589		Datum: WGS8	84	
Soil Map Unit Name: Kokomo silty clay loam, 0-2% sl	opes			NWI clas	ssification: N/A		
Are climatic / hydrologic conditions on the site typical	for this time of	of year?	Yes X	No (If no,	explain in Remarl	ks.)	
Are Vegetation N , Soil N , or Hydrology N	significantly	disturbed? /	Are "Normal (	 Circumstances" preser	nt? Yes X	No	
Are Vegetation N, Soil N, or Hydrology N	naturally pro	blematic? (	(If needed, ex	xplain any answers in F	Remarks.)		_
SUMMARY OF FINDINGS - Attach site m	ap showi	ng samplin	ıg point lo	cations, transect	s, important	features	s, etc.
Hydrophytic Vegetation Present? Yes N	lo X	Is the	Sampled A	rea			
	lo X	withi	n a Wetland	? Yes	No <u>X</u>		
Wetland Hydrology Present? Yes N	lo X						
Remarks:							
Wetland 3 Upland Point							
VEGETATION – Use scientific names of pla	ante						-
VEGETATION – Ose scientific flames of pie	Absolute	Dominant	Indicator	I			
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test v	vorksheet:		
1				Number of Domina	•		
2.				Are OBL, FACW, o		1	(A)
3. 4.				Total Number of Do Across All Strata:	ominant Species	2	(B)
5.				Percent of Domina	nt Species That		<b>—</b> (D)
		=Total Cover		Are OBL, FACW, o	•	50.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15	)						
1				Prevalence Index			
2.				Total % Cover		ultiply by:	_
3. 4.				OBL species FACW species	0 x 1 = 15 x 2 =	30	_
5.				FAC species	60 x 3 =	180	_
		=Total Cover		FACU species	25 x 4 =	100	_
Herb Stratum (Plot size: 5 )				UPL species	0 x 5 =	0	_
1. Poa pratensis	60	Yes	FAC	Column Totals:		310	(B)
2. Cornus alba	15	No No	FACW	Prevalence Inde	x = B/A =	3.10	_
Cirsium arvense     Oenothera parviflora	<u>5</u> 	No Yes	FACU FACU	Hydrophytic Vege	tation Indicators		
		165	FACU		for Hydrophytic V		
5. 6.				2 - Dominance		ogotano	
7.				3 - Prevalence	Index is ≤3.0 <sup>1</sup>		
8.					cal Adaptations <sup>1</sup> (	•	
9					arks or on a sepa		•
10	400	T-4-1-0			drophytic Vegeta	, ,	,
Woody Vine Stratum (Plot size: 15	100	=Total Cover		<sup>1</sup> Indicators of hydric be present, unless			/ must
1. (Flot size	,			•	disturbed or prob	lemanc.	
2.				Hydrophytic Vegetation			
		=Total Cover		-	esNo	X	
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			1			

US Army Corps of Engineers

SOIL Sampling Point: SP06

	ription: (Describe t	o the depth				ator or o	confirm the a	bsence of inc	dicators.)	
Depth	Matrix			ox Featur	-	. 2	_			
(inches)	Color (moist)		Color (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Textu		Remarks	
0-6	10YR 4/3	100					Loamy/C	layey	Roadway f	ill
							-			
1				· <del></del>				<u> </u>		
	ncentration, D=Depl	etion, RM=R	educed Matrix, l	MS=Mas	ked Sand	Grains			=Pore Lining, M=Ma	
Hydric Soil I			Sandy Cla	aved Met	riv (C1)				r <b>Problematic Hydri</b> irie Redox (A16)	c Solls :
Histosol (	ipedon (A2)		Sandy Gle Sandy Re	-			-		janese Masses (F12	`
Black His			Stripped N	, ,			-		nt Material (F21)	,
	n Sulfide (A4)		Dark Surfa		)		-		low Dark Surface (F	22)
	Layers (A5)		Loamy Mu		eral (F1)		-		plain in Remarks)	)
2 cm Mu			Loamy Gl	-			-		piani in romano)	
	Below Dark Surface	(A11)	Depleted	-	, ,					
	rk Surface (A12)	v· · · · /	Redox Da	`	,		3	Indicators of I	hydrophytic vegetation	on and
	ucky Mineral (S1)		Depleted		` '				ydrology must be pre	
	cky Peat or Peat (S3	)	Redox De		, ,			-	turbed or problemat	
Restrictive I	.ayer (if observed):	•		•	• •				· · · · · · · · · · · · · · · · · · ·	
Type:	Compression/roa	adway fill								
Depth (in		6	<del>-</del>				Hydric Soil	Present?	Yes	No X
Remarks:			_							
<b>HYDROLO</b>	GY									
Wetland Hyd	Irology Indicators:									
Primary Indic	ators (minimum of o	ne is require	d; check all that	apply)				Secondary Ind	dicators (minimum of	two required)
Surface \	Vater (A1)		Water-Sta	ained Lea	ives (B9)		_	Surface S	oil Cracks (B6)	
High Wat	er Table (A2)		Aquatic F	•	•		-		Patterns (B10)	
Saturatio	n (A3)		True Aqua				_		on Water Table (C2)	
Water Ma	arks (B1)		Hydrogen	Sulfide (	Odor (C1)	)	_		Burrows (C8)	
	t Deposits (B2)		Oxidized I			•	oots (C3)		Note:	• • • •
	osits (B3)		Presence		,	,	(00)		r Stressed Plants (D	1)
	t or Crust (B4)		Recent Iro			ned Soil	s (C6)		nic Position (D2)	
Iron Depo			Thin Muck		` '		=	FAC-Neut	ral Test (D5)	
	n Visible on Aerial In		Gauge or		. ,					
	Vegetated Concave	Surface (DO)	Other (Ex	piaiii III P	ciliaiks)					
Field Observ Surface Water			No. Y	Denth (i	nches).		1			
Water Table		S	No X No X		nches): _ nches):		1			
Saturation Pr		<u> </u>	No X		nches):		Wetland	Hydrology Pr	resent? Yes	No X
(includes cap			<u>/</u>	2 opui (i			- Todana	, a. ology ri		
	corded Data (stream	gauge, moni	toring well. aeria	al photos	, previous	s inspec	tions), if avail	able:		
Remarks:										

Project/Site: Beacon Station Project		City/Cou	nty: Franklir	1	Sampling Date	e: <u>7/13/</u>	22
Applicant/Owner: AEP				State: OH	Sampling Poir	nt: <u>S</u>	P07
Investigator(s): Charlie Allen, Samantha Heitzenrater		Section, 1	Township, Ra	nge: N/A			
Landform (hillside, terrace, etc.): Depression			Local relief (d	concave, convex, none):	Concave		
Slope (%): 1 Lat: 40.011398		Long:	83.120387		Datum: WGS84	,	
Soil Map Unit Name: Kokomo silty clay loam, 0-2% sl	opes			NWI classif	ication: N/A		
Are climatic / hydrologic conditions on the site typical	for this time of	of year?	Yes X	No (If no, exp	olain in Remarks	.)	
Are Vegetation N , Soil N , or Hydrology N	significantly	disturbed? A	Are "Normal (	Circumstances" present?	Yes X	No	
Are Vegetation N , Soil N , or Hydrology N	naturally prol	blematic? (	If needed, ex	plain any answers in Rer	narks.)	<u>-</u>	_
SUMMARY OF FINDINGS – Attach site m			g point lo	cations, transects,	important fo	atures	, etc.
Hydrophytic Vegetation Present? Yes X N	lo	Is the	Sampled A	rea			
	lo		n a Wetland		No		
Wetland Hydrology Present? Yes X	lo						
Remarks:		<u>-</u>					
Wetland 4 PEM							
VEGETATION – Use scientific names of pla		Damainant	lundin në nu	1			
Tree Stratum (Plot size: 30 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:		
1				Number of Dominant	Species That		
2.				Are OBL, FACW, or F	AC:	2	(A)
3.				Total Number of Domi	inant Species		
4.				Across All Strata:	_	2	_(B)
5		=Total Cover		Percent of Dominant S Are OBL, FACW, or F	•	100.0%	(A/R)
Sapling/Shrub Stratum (Plot size: 15	)	- Total Cover		Ale OBE, I ACW, OI I		100.070	_(^/D)
1.	.′			Prevalence Index wo	rksheet:		
2.				Total % Cover of	: Multi	iply by:	_
3.				OBL species	x 1 =		_
4				FACW species	x 2 =		_
5				FAC species	x 3 =		-
Horb Stratum (Diet eizer E.)		=Total Cover		FACU species	x 4 =		-
Herb Stratum (Plot size: 5 )  1. Typha angustifolia	50	Yes	OBL	UPL species Column Totals:	x 5 =		(B)
Carex vulpinoidea	10	No	FACW	Prevalence Index :			_ <sup>(D)</sup>
Scirpus atrocinctus	15	No	OBL	Trevalence macx	- b/A -		-
4. Juncus effusus	25	Yes	OBL	Hydrophytic Vegetat	ion Indicators:		
5.				X 1 - Rapid Test for			
6.				X 2 - Dominance Te		-	
7.				3 - Prevalence Inc	dex is ≤3.0 <sup>1</sup>		
8				4 - Morphological			
9					s or on a separa	,	
10	. <del></del>			Problematic Hydro			,
Manda Vina Chatana (Diataina		=Total Cover		<sup>1</sup> Indicators of hydric so			must
Woody Vine Stratum (Plot size:	_)			be present, unless dis	turbed or proble	matic.	
1. 2.				Hydrophytic			
<del>-</del>		=Total Cover		Vegetation Present? Yes	X No		
Remarks: (Include photo numbers here or on a sepa							
	4.0 011001.)						

US Army Corps of Engineers

SOIL Sampling Point: SP07

Depth	cription: (Describe to	the depth				tor or o	confirm the	absence of	indicators.)
•	Matrix			x Featur					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Text	ure	Remarks
0-5	10YR 3/2	95	10YR 5/6	3	С	M	Loamy/	Clayey	
			10YR 5/6	2	С	PL			
5-20	10YR 3/2	93	10YR 5/6	7	C	M	Loamy/	Clayey	
							-		
1 <sub>T. max</sub> 0-0		tion DM-F	Deduced Metric B					21	DI - Dana Lining M-Matrix
Hydric Soil	oncentration, D=Deple	tion, Rivi=F	Reduced Matrix, I	vi5=ivias	ked Sand	Grains	i.		PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Gle	wed Mat	riv (S4)				Prairie Redox (A16)
	pipedon (A2)		Sandy Red	-	IIX (O4)				anganese Masses (F12)
Black His			Stripped M		3)				arent Material (F21)
	n Sulfide (A4)		Dark Surfa	•	• /				hallow Dark Surface (F22)
	l Layers (A5)		Loamy Mu		eral (F1)				Explain in Remarks)
2 cm Mu			Loamy Gle	-					•
Depleted	d Below Dark Surface (	(A11)	Depleted N						
Thick Da	ark Surface (A12)		X Redox Dai	rk Surfac	e (F6)			<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		Depleted [	Dark Sur	face (F7)			wetland	d hydrology must be present,
5 cm Mu	icky Peat or Peat (S3)		Redox De	pression	s (F8)			unless	disturbed or problematic.
Restrictive I	Layer (if observed):								
Type:	N/A								
Depth (ir	nches):						Hydric Sc	oil Present?	Yes No
Remarks:						-			
HYDROLO	)GY								
HYDROLO									
Wetland Hy	drology Indicators:	e is require	ed: check all that	annly)				Secondary	Indicators (minimum of two required)
Wetland Hyd	drology Indicators: cators (minimum of on	e is require	•		ves (B9)				Indicators (minimum of two required)
Wetland Hyd Primary Indic	drology Indicators: cators (minimum of on Water (A1)	e is require	Water-Sta	ined Lea	` ,			Surface	e Soil Cracks (B6)
Wetland Hyde Primary India Surface High Wa	drology Indicators: cators (minimum of on Water (A1) tter Table (A2)	e is require	Water-Sta Aquatic Fa	ined Lea auna (B1	3)			Surface Drainaç	e Soil Cracks (B6) ge Patterns (B10)
Wetland Hyd Primary India Surface High Wa Saturatio	drology Indicators: cators (minimum of on Water (A1) tter Table (A2)	e is require	Water-Sta	ined Lea auna (B1 itic Plant	3) s (B14)			Surface Drainag	e Soil Cracks (B6)
Wetland Hyd Primary India Surface V High Wa Saturatio Water M	drology Indicators: cators (minimum of on- Water (A1) uter Table (A2) on (A3)	e is require	Water-Sta Aquatic Fa True Aqua	ined Lea auna (B1 itic Plant Sulfide (	3) s (B14) Odor (C1)	)	oots (C3)	Surface Drainag Dry-Se Crayfis	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2)
Wetland Hyd Primary India Surface of High Wa Saturation Water M Sedimen	drology Indicators: cators (minimum of on Water (A1) hter Table (A2) on (A3) larks (B1)	e is require	Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 itic Plant Sulfide ( Rhizosph	3) s (B14) Odor (C1) eres on L	) ₋iving R	oots (C3)	Surface Drainaç Dry-See Crayfis X Saturat	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
Wetland Hyd Primary India Surface of High Wa Saturation Water M Sedimen Drift Dep	drology Indicators: cators (minimum of on Water (A1) ter Table (A2) on (A3) larks (B1) nt Deposits (B2)	e is require	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F	ined Lea auna (B1 itic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1) eres on l ced Iron (	) Living Ro C4)	, ,	Surface Drainag Dry-Se Crayfis X Saturat Stunted	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9)
Wetland Hyd Primary India Surface V High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep	drology Indicators: cators (minimum of on) Water (A1) Inter Table (A2) In (A3) Intraction (B1) Int Deposits (B2) Introcessits (B3) Introcessits (B4) Introcessits (B4) Introcessits (B4) Introcessits (B5)		Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 sulfide ( Rhizosph of Reduc in Reduc Surface	3) s (B14) Odor (C1) eres on Led Iron (tion in Ti	) Living Ro C4)	, ,	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Wetland Hyd Primary India Surface of High Wa Saturatio Water M Sediment Drift Dep Algal Ma Iron Dep Inundatio	drology Indicators: cators (minimum of on) Water (A1) Inter Table (A2) In (A3) Intra (B1) Int Deposits (B2) Intro (B3) Intro (B4) Intro (B4) Intro (B4) Intro (B5) Intro (B5) Intro (B5) Intro (B5) Intro (B5) Intro (B5) Intro (B6) In	agery (B7)	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck Gauge or V	ined Lea auna (B1 Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat	3) s (B14) Odor (C1) eres on L ced Iron ( tion in Ti (C7) a (D9)	) Living Ro C4)	, ,	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Wetland Hyd Primary India Surface of High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio	drology Indicators: cators (minimum of on) Water (A1) Inter Table (A2) In (A3) Intraction (B1) Int Deposits (B2) Introcessits (B3) Introcessits (B4) Introcessits (B4) Introcessits (B4) Introcessits (B5)	agery (B7)	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck Gauge or V	ined Lea auna (B1 Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat	3) s (B14) Odor (C1) eres on L ced Iron ( tion in Ti (C7) a (D9)	) Living Ro C4)	, ,	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Wetland Hyd Primary India Surface V High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely	drology Indicators: cators (minimum of one Water (A1) Ater Table (A2) On (A3) Arks (B1) At Deposits (B2) At or Crust (B4) Ater Table (B5) Ater Table (A2) Ater Table (A3) Ater	agery (B7) Surface (B8	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck Gauge or V Other (Exp	ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat blain in R	3) s (B14) Odor (C1) eres on L ced Iron ( tion in Ti (C7) a (D9)	) Living Ro C4)	, ,	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Wetland Hyd Primary India Surface of High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obsert	drology Indicators: cators (minimum of on Water (A1) ther Table (A2) on (A3) tarks (B1) th Deposits (B2) toosits (B3) th or Crust (B4) toosits (B5) on Visible on Aerial Improved the services of the services	agery (B7) Surface (B8	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck Gauge or V Other (Exp	ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat blain in R	3) s (B14) Odor (C1) eres on L ced Iron ( tion in Ti (C7) a (D9) emarks)	) Living Ro C4) Illed Soil	, ,	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Wetland Hyderimary India Surface of High Water Mater M	drology Indicators: cators (minimum of on) Water (A1) Inter Table (A2) Inter Table (A3) Introduction (B1) Introduction (B2) Introduction (B2) Introduction (B3) Introduction (B4) Introduction (	agery (B7) Surface (B8	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck Gauge or V Other (Exp	ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat blain in R  Depth (i Depth (i	3) s (B14) Odor (C1) eres on L ced Iron ( tion in Ti (C7) a (D9) lemarks) nches): _ nches): _	) Living Ro C4) Illed Soil	ds (C6)	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo FAC-No	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Wetland Hyderimary India Surface of High Water Mater Table Saturation Primary India Mater Mater Table Saturation Primary India Mater	drology Indicators: cators (minimum of on Water (A1) Inter Table (A2) In (A3) Introduction (B2) Introduction (B2) Introduction (B3) Introduction (B4) Introd	agery (B7) Surface (B8	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck Gauge or V Other (Exp	ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat blain in R	3) s (B14) Odor (C1) eres on L ced Iron ( tion in Ti (C7) a (D9) lemarks) nches): _ nches): _	) Living Ro C4) Illed Soil	ds (C6)	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Wetland Hyderimary India Surface of High Water Management Sediment Drift Depter Algal Maler Iron Depter Inundation Sparsely Field Obsert Surface Water Table Saturation Project Includes cap	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial Importance of Vegetated Concave Servations: are Present? Present? Present? Yes pillary fringe)	agery (B7) Surface (B8	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck Gauge or V Other (Exp No X No X No X	ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat blain in R Depth (i Depth (i	3) s (B14) Ddor (C1) eres on L ced Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro C4) Iled Soil	Wetland	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo FAC-No	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Wetland Hyderimary India Surface of High Water Management Sediment Drift Depter Algal Maler Iron Depter Inundation Sparsely Field Obsert Surface Water Table Saturation Project Includes cap	drology Indicators: cators (minimum of on Water (A1) Inter Table (A2) In (A3) Introduction (B2) Introduction (B2) Introduction (B3) Introduction (B4) Introd	agery (B7) Surface (B8	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck Gauge or V Other (Exp No X No X No X	ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat blain in R Depth (i Depth (i	3) s (B14) Ddor (C1) eres on L ced Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro C4) Iled Soil	Wetland	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo FAC-No	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Wetland Hyderimary India Surface of High Waster Mater Table Saturation Projection (includes caped)	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial Importance of Vegetated Concave Servations: are Present? Present? Present? Yes pillary fringe)	agery (B7) Surface (B8	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck Gauge or V Other (Exp No X No X No X	ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat blain in R Depth (i Depth (i	3) s (B14) Ddor (C1) eres on L ced Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro C4) Iled Soil	Wetland	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo FAC-No	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Wetland Hyderimary India Surface of High Water Management Sediment Drift Depter Algal Maler Iron Depter Inundation Sparsely Field Obsert Surface Water Table Saturation Project Includes cap	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial Importance of Vegetated Concave Servations: are Present? Present? Present? Yes pillary fringe)	agery (B7) Surface (B8	Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck Gauge or V Other (Exp No X No X No X	ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat blain in R Depth (i Depth (i	3) s (B14) Ddor (C1) eres on L ced Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro C4) Iled Soil	Wetland	Surface Drainag Dry-Se Crayfis X Saturat Stunted X Geomo FAC-No	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)

Project/Site: Beacon Station Project		City/Cou	nty: Franklir	า	Sampling Da	ate: 7/13	/22
Applicant/Owner: AEP				State: OH	Sampling Po	oint:	SP08
Investigator(s): Charlie Allen, Samantha Heitzenrater		Section, T	ownship, Ra	inge: N/A	<del>_</del>		
Landform (hillside, terrace, etc.): Terrace			Local relief (	concave, convex, none	): None		
Slope (%): 0 Lat: 40.01139		Long: -	83.120287		Datum: WGS8	<del></del> 34	
Soil Map Unit Name: Kokomo silty clay loam, 0-2% sk	opes			NWI clas	sification: N/A		
Are climatic / hydrologic conditions on the site typical t	-	f vear?	Yes X	No (If no, e	xplain in Remark	Ks.)	
Are Vegetation N , Soil N , or Hydrology N	significantly of	isturbed? A	Are "Normal (	Circumstances" presen			
Are Vegetation N , Soil N , or Hydrology N				· ιplain any answers in R			_
SUMMARY OF FINDINGS – Attach site m				-	•	features	, etc.
Hydrophytic Vegetation Present? Yes N	o X	Is the	Sampled A	rea			
Hydric Soil Present? Yes N	o X	within	n a Wetland	? Yes	No X		
Wetland Hydrology Present? Yes N	o <u>X</u>						
Remarks: Wetland 4 Upland Point  VEGETATION – Use scientific names of pla	ants.						
·	Absolute	Dominant	Indicator				
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test w			
1. 2.				Number of Dominar Are OBL, FACW, or	•	1	(A)
2							_(^)
4.				Total Number of Do Across All Strata:	minant Species	2	(B)
5.				Percent of Dominar	it Species That		_(_/
	:	Total Cover		Are OBL, FACW, or	•	50.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15	)						
1.				Prevalence Index			
2.				Total % Cover		ıltiply by:	_
3.				OBL species	0 x 1 = 0 x 2 =	0	_
5.				FACW species  FAC species	0 x 2 = 30 x 3 =	90	_
J		=Total Cover		FACU species	75 x4=	300	_
Herb Stratum (Plot size: 5 )		rotal Covol		UPL species	0 x 5 =	0	_
1. Oenothera parviflora	15	No	FACU	l	105 (A)	390	(B)
2. Festuca rubra	40	Yes	FACU	Prevalence Index		3.71	_ ` ′
3. Cornus alba	5	No	FACU				
4. Cirsium arvense	15	No	FACU	Hydrophytic Veget	ation Indicators	<b>:</b> :	
5. Poa pratensis	30	Yes	FAC	1 - Rapid Test f	or Hydrophytic V	'egetation	
6				2 - Dominance			
7.				3 - Prevalence			
8					al Adaptations <sup>1</sup> ( arks or on a sepa		
9.					•		•
10	105	Total Cover		<del></del>	drophytic Vegeta		
Woody Vine Stratum (Plot size:	)	- Total Gover		<sup>1</sup> Indicators of hydric be present, unless of			must
1.	,				р. о.		
2.				Hydrophytic Vegetation			
	:	Total Cover		Present? Ye	s No	Х	
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			1			
	,						

US Army Corps of Engineers

SOIL Sampling Point: SP08

	ription: (Describe	to the depth				tor or c	confirm the ab	sence of indicato	ors.)	
Depth	Matrix			x Featur	-	. 2	_			
(inches)	Color (moist)	% (	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-12	10YR 4/1	100					Loamy/Cla	yey		
	oncentration, D=Depl	etion, RM=Re	educed Matrix, I	MS=Mas	ked Sand	d Grains		ocation: PL=Pore		
Hydric Soil I							In	dicators for Prob	-	Soils <sup>3</sup> :
Histosol			Sandy Gle	-			_	Coast Prairie Re		
	ipedon (A2)		Sandy Re	, ,			_	Iron-Manganese		
Black His	, ,		Stripped N		5)		_	_Red Parent Mat	, ,	2)
	n Sulfide (A4)		Dark Surfa		1 (54)		_	Very Shallow Da	•	2)
	Layers (A5)		Loamy Mu	-			_	Other (Explain i	n Remarks)	
2 cm Mu	, ,	(A11)	Loamy Gle Depleted I	-						
	Below Dark Surface rk Surface (A12)	(A11)	Redox Da	,	,		31	ndicators of hydror	abutia vagatatian	and
	ucky Mineral (S1)		Depleted I		` '		11	wetland hydrolo	-	
	cky Peat or Peat (S3	١	Redox De		, ,			unless disturbed		
		,	RCGOX BC	pression	3 (1 0)			dilicas distarbet	a or problematic	•
	_ayer (if observed):									
Type:	Rock	10	_				Uvdria Cail F	Dragont?	Vee	No V
Depth (in Remarks:		12	-				Hydric Soil F	resent?	Yes	No X
<b>HYDROLO</b>	GY									
Wetland Hyd	drology Indicators:									
Primary Indic	ators (minimum of o	ne is required	l; check all that	apply)			<u>Se</u>	econdary Indicator	<u>rs (minimum of t</u>	wo required)
Surface \	Water (A1)		Water-Sta	ined Lea	ives (B9)			_Surface Soil Cra		
	ter Table (A2)		Aquatic Fa	•	•			_Drainage Patter	` '	
Saturatio			True Aqua					Dry-Season Wa		
Water Ma			Hydrogen					_Crayfish Burrow	, ,	( <b>-</b> -)
	t Deposits (B2)		Oxidized F			•	oots (C3)	_Saturation Visib		,
	osits (B3)		Presence		,	,		_Stunted or Stres		)
	t or Crust (B4)		Recent Iro			ilea Soii:	s (C6)	Geomorphic Po		
	osits (B5) on Visible on Aerial Ir	nagery (R7)	Gauge or		` '		_	_FAC-Neutral Te	St (D3)	
	Vegetated Concave				. ,					
Field Observ				- I I I I I I I I I I I I I I I I I I I	- Comanto,					
Surface Water		2	No X	Denth (i	nches):					
Water Table		s	No X		nches):					
Saturation Pr		s	No X		nches):		Wetland H	ydrology Present	t? Yes	No X
(includes cap					_			,		
	corded Data (stream	gauge, monit	oring well, aeria	al photos	, previous	s inspec	tions), if availal	ble:		
	<u> </u>	- <del>-</del> ·					·			
Remarks:										



Project/Site:		ation Project					Stantec Project #:	193710350		Date:	05/02/23
Applicant:	AEP Ohio	Fransmission Comp	any Inc.							County:	Franklin
Investigator #1:	Matt Denzl	er		Invest	tigator #2:					State:	Ohio
Soil Unit:	Udorthent, loa	my, steep				l	IWI/WWI Classification	: PEM1A		Wetland ID:	Wetland 5
Landform:	Depression	1		Loc	cal Relief:	Concav	Э			Sample Point:	SP09
Slope (%):	0		40.01616		.ongitude:			Datum:	WGS84	Community ID:	PFO
		litions on the site typ				, explain in		Yes □	No	Section:	
		or Hydrology 🗆 sigr					Are normal circumsta	ances present?	?	Township:	
Are Vegetation	□ , Soil □ ,	or Hydrology 🗆 nat	urally proble	ematic?			Yes	N⊍		Range:	Dir:
SUMMARY OF	FINDINGS										
Hydrophytic Ve					s 🗆 No			Hydric Soils	Present?		
Wetland Hydrol	logy Present	?		Yes	s 🗆 No			Is This Samp	oling Point	Within A Wetla	and? <b>□ Yes ■ No</b>
Remarks:	PFO										
HYDROLOGY											
Wetland Hydr	ology Indica	ators (Check here if	indicators a	are not p	resent	):					
Primary		•				,			Secondary:		
✓	A1 - Surface	Water		✓	B9 - Wate	r-Stained	Leaves			B6 - Surface So	oil Cracks
✓	A2 - High Wa				B13 - Aqu					B10 - Drainage	
✓	A3 - Saturation				B14 - True					C2 - Dry-Seaso	
	B1 - Water M B2 - Sedimer				C1 - Hydro					C8 - Crayfish B	
	B2 - Sedimer B3 - Drift De	•					spheres on Living Roots educed Iron				Visible on Aerial Imagery Stressed Plants
	B4 - Algal Ma						duction in Tilled Soils		□	D2 - Geomorph	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutr	
		on Visible on Aerial Ima	igery		D9 - Gaug	ge or Well	Data				
	B8 - Sparsely	Vegetated Concave S	urface		Other (Ex	plain in Re	marks)				
Field Observat	tions:										
Surface Water	Present?	☑ Yes □ No	Depth:	4	(in.)			Wetland Hy	drology Di	rocont? -	Yes □ No
Water Table Pr	esent?		Depth:	0	(in.)			wettand my	urology Fi	esent:	162   110
Saturation Pres	ent?	☑ Yes □ No	Depth:	0	(in.)						
Describe Record	led Data (str	eam gauge, monitorir	ng well, aeria	l photos.	previous i	nenectio	s) if available:		N/A		
			,		, ,	Поресио	is), ii avaliabic.				
Remarks:			<u> </u>		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Пареспо	s), ii avaliable.				
			,			Пареспо	sy, ii available.				
SOILS	·	Udorthent loamy s				Пэреспо	s), ii avaliabie.				
SOILS Map Unit Name		Udorthent, loamy, s	steep					H/Coated Sand Grains: Loc		n M=Matrix)	
SOILS Map Unit Name Profile Descrip	otion (Describe to		steep	bsence of indica			Depletion, RM=Reduced Matrix, CS=Covered			g, M=Matrix)	Texture
SOILS Map Unit Name Profile Descrip Top	Bottom	he depth needed to document the ind	steep	bsence of indica	ators.) (Type: C=Co		Depletion, RM=Reduced Matrix, CS=Covered Red	lox Features	ation: PL=Pore Linin	•	Texture
SOILS Map Unit Name Profile Descrip Top Depth	Bottom  Depth	he depth needed to document the ind	icator or confirm the al	bsence of indica Matrix Moist)	ators.) (Type: C=Co	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red	lox Features %	ation: PL=Pore Lining	Location	(e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth	the depth needed to document the ind  Horizon  1	cicator or confirm the all	Matrix Moist) 2/1	% 100	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	lox Features % 	ation: PL=Pore Lining Type	Location 	(e.g. clay, sand, loam) pam (fibrous/organic ma
SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 6	he depth needed to document the ind  Horizon  1 2	cater or confirm the at Color (I 10YR 10YR	Matrix Woist) 2/1 3/2	% 100 100	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	lox Features % 	ation: PL=Pore Lining  Type	Location 	(e.g. clay, sand, loam) pam (fibrous/organic ma clay loam (fibrous)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 6	Bottom Depth 2 6 18	Horizon  1  2  3	cater or confirm the at  Color (I  10YR  10YR  10YR	Matrix Moist)  2/1  3/2  4/1	% 100 100 30	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	% 20	Type C	Location   M	(e.g. clay, sand, loam) pam (fibrous/organic ma clay loam (fibrous) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 2 6	Bottom Depth 2 6 18	Horizon  1  2  3  3	color (I 10YR 10YR 10YR 10YR 2.5Y	Matrix Woist) 2/1 3/2 4/1 6/3	% 100 100 30 50	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	%  20	Type C	Location M	(e.g. clay, sand, loam) pam (fibrous/organic ma clay loam (fibrous) clay loam clay loam
SOILS  Map Unit Name Profile Descrip Top Depth 0 2 6	Bottom (Depth 2 6 18	Horizon  1 2 3 3	color (I 10YR 10YR 10YR 2.5Y	Matrix Moist) 2/1 3/2 4/1 6/3	% 100 100 30 50	oncentration, D-	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	Ox Features	ation: PL=Pore Lining Type C	Location M	(e.g. clay, sand, loam)  bam (fibrous/organic maclay loam (fibrous)  clay loam  clay loam  clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 2 6	Bottom Depth 2 6 18	Horizon  1  2  3  3	color (I 10YR 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3	% 100 100 30 50	oncentration, D-	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	Section   Sect	ation: PL=Pore Lining Type C	Location M	(e.g. clay, sand, loam) pam (fibrous/organic ma clay loam (fibrous) clay loam clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth 0 2 6	Bottom (Depth 2 6 18	Horizon  1 2 3 3	color (I 10YR 10YR 10YR 2.5Y	Matrix Moist) 2/1 3/2 4/1 6/3	% 100 100 30 50	oncentration, D-	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	Section   Sect	ation: PL=Pore Lining Type C	Location M	(e.g. clay, sand, loam)  bam (fibrous/organic maclay loam (fibrous)  clay loam  clay loam  clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth 0 2 6	Bottom Depth 2 6 18	Horizon  1 2 3 3	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist) 2/1 3/2 4/1 6/3	% 100 100 30 50	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	Section   Sect	ation: PL=Pore Lining Type C	Location M	(e.g. clay, sand, loam)  bam (fibrous/organic maclay loam (fibrous)  clay loam  clay loam  clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth 0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field In	Horizon  1 2 3 3	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3      Dors are n	% 100 100 30 50 oot present		Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	No.   No.	Type C s for Probler	Location   M	(e.g. clay, sand, loam)  bam (fibrous/organic maclay loam (fibrous)  clay loam  clay loam  clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir	Horizon  1 2 3 3 dicators (check he	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3    Drs are n	% 100 100 30 50 stot present	oncentration, Do	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	No.   No.	Type C 6 for Probler	Location   M	(e.g. clay, sand, loam)  bam (fibrous/organic maclay loam (fibrous)  clay loam  clay loam  clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth 0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic E	Horizon  1 2 3 3 dicators (check he	Color (I 10YR 10YR 10YR 2.5Y	Matrix Woist) 2/1 3/2 4/1 6/3	% 100 100 30 50 otot present S4 - Sand S5 - Sand	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix	No.   No.	Type   C    s for Probler  A16 - Coast S7 - Dark S	Location   M      matic Soils  Prairie Redox urface	(e.g. clay, sand, loam) bam (fibrous/organic maclay loam (fibrous) clay loam clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth  0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic E; A3 - Black Hi	Horizon  1 2 3 3	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3    Drs are n	% 100 100 30 50	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix	No.   No.	Type C s for Probler S7 - Dark S F12 - Iron-N	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma     clay loam (fibrous)     clay loam     clay loam     es
SOILS  Map Unit Name Profile Descrip  Top Depth 0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black Hi A4 - Hydroge	Horizon  1 2 3 3 idicators (check he	Color (I 10YR 10YR 10YR 2.5Y	Matrix Woist) 2/1 3/2 4/1 6/3	% 100 100 30 50 ot present \$4 - Sand \$5 - Sand \$6 - Stript F1 - Loam	oncentration, D-	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	No.   No.	ation: PL=Pore Lining  Type   C    s for Probler  A16 - Coast S  F12 - Iron-N  TF12 - Very	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma     clay loam (fibrous)     clay loam     clay loam     es
SOILS  Map Unit Name Profile Descrip  Top Depth 0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic E; A3 - Black Hi	Horizon  1 2 3 3 dicators (check he	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3    ors are n	% 100 100 30 50	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix ineral Matrix	No.   No.	ation: PL=Pore Lining  Type   C    s for Probler  A16 - Coast S  F12 - Iron-N  TF12 - Very	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma     clay loam (fibrous)     clay loam     clay loam     es
SOILS  Map Unit Name Profile Descrip  Top Depth 0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M	Horizon  1 2 3 3 dicators (check he	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3     Drs are n	% 100 100 30 50 oot present S4 - Sand S5 - Sand S6 - Stript F1 - Loam F2 - Loam	oncentration, December 2015 on Contraction, December 2015 on Contr	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	No.   No.	ation: PL=Pore Lining  Type   C    s for Probler  A16 - Coast S  F12 - Iron-N  TF12 - Very	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma     clay loam (fibrous)     clay loam     clay loam     es
SOILS  Map Unit Name Profile Descrip  Top Depth  0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic E; A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick I	Horizon  1 2 3 3	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3    ors are n	% 100 100 30 50 sot presen: \$4 - Sand \$5 - Sand \$6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, Daniel Concentration, Daniel C	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	No.   No.	ation: PL=Pore Lining  Type   C    s for Probler  A16 - Coast S  F12 - Iron-N  TF12 - Very	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma     clay loam (fibrous)     clay loam     clay loam     es
SOILS  Map Unit Name Profile Descrip  Top Depth  0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick [ S1 - Sandy M	Horizon  1 2 3 3	Color (I 10YR 10YR 10YR 2.5Y	Matrix Woist)  2/1  3/2  4/1  6/3    Dors are n	% 100 100 30 50 otot present S4 - Sand S5 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo	oncentration, Daniel Concentration, Daniel C	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	No.   No.	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Explain	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma clay loam (fibrous) clay loam clay loam es
SOILS  Map Unit Name Profile Descrip  Top Depth  0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick [ S1 - Sandy M	Horizon  1 2 3 3	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3    ors are n	% 100 100 30 50 sot presen: \$4 - Sand \$5 - Sand \$6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, Daniel Concentration, Daniel C	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	No.   No.	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Explain	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma     clay loam (fibrous)     clay loam     clay loam     es
SOILS  Map Unit Name Profile Descrip Top Depth 0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick [ S1 - Sandy M	Horizon  1 2 3 3	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3    ors are n	% 100 100 30 50 sot presen: \$4 - Sand \$5 - Sand \$6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, Daniel Concentration, Daniel C	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	No.   No.	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Explain	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma clay loam (fibrous) clay loam clay loam es
SOILS  Map Unit Name Profile Descrip  Top Depth 0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiee A12 - Thick If S1 - Sandy M S3 - 5 cm Me	Horizon  1 2 3 3	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3    ors are n	% 100 100 30 50 sot presen: \$4 - Sand \$5 - Sand \$6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, Daniel Concentration, Daniel C	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	lox Features % 20 Indicators  Indicators of hydroph	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Explain	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma clay loam (fibrous)  clay loam  clay loam      es  urface
SOILS  Map Unit Name Profile Descrip Top Depth 0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiee A12 - Thick If S1 - Sandy M S3 - 5 cm Me	Horizon  1 2 3 3	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3    ors are n	% 100 100 30 50 sot presen: \$4 - Sand \$5 - Sand \$6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, Daniel Concentration, Daniel C	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	lox Features % 20 Indicators  Indicators of hydroph	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Explain	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma clay loam (fibrous)  clay loam  clay loam      es  urface
SOILS  Map Unit Name Profile Descrip  Top Depth 0 2 6 NRCS Hydric	Bottom Depth 2 6 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiee A12 - Thick If S1 - Sandy M S3 - 5 cm Me	Horizon  1 2 3 3	Color (I 10YR 10YR 10YR 2.5Y	Matrix Moist)  2/1  3/2  4/1  6/3    ors are n	% 100 100 30 50 sot presen: \$4 - Sand \$5 - Sand \$6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, Daniel Concentration, Daniel C	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	lox Features % 20 Indicators  Indicators of hydroph	Type C s for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Explain	Location  M	(e.g. clay, sand, loam)  pam (fibrous/organic ma clay loam (fibrous)  clay loam  clay loam      es  urface



Project/Site: Beacon Station Project Wetland 5 Sample Point: SP09

VEGETATION	(Species identified in all uppercase	are non-native	species.)			
Tree Stratum (Pl	ot size: 30 ft radius)					
	Species Name		% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.	Acer negundo		20	Υ	FAC	
2.	Populus deltoides		10	Υ	FAC	Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.						
4.						Total Number of Dominant Species Across All Strata:5(B)
5.						
6.						Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7.						
8.						Prevalence Index Worksheet
9.						Total % Cover of: Multiply by:
10.						OBL spp. 12 x 1 = 12
	Т	otal Cover =	30			FACW spp. $\frac{77}{}$ x 2 = $\frac{154}{}$
						FAC spp. 57 x 3 = 171
Sapling/Shrub Str	ratum (Plot size: 15 ft radius)					FACU spp. $0   x   4 = 0$
1.	Acer negundo		15	Y	FAC	UPL spp. $0   x   5 = 0$
2.	Rhamnus cathartica		7	Υ	FAC	
3.	Salix interior		2	N	FACW	Total <u>146</u> (A) <u>337</u> (B)
4.						
5.						Prevalence Index = B/A = 2.308
6.						
7.						
8.						Hydrophytic Vegetation Indicators:
9.						☐ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.	<u></u>					
	I	otal Cover =	24			
						□ Yes ☑ No Morphological Adaptations (Explain) *
	ot size: 5 ft radius)					□ Yes □ No Problem Hydrophytic Vegetation (Explain) *
1.	Prunella vulgaris		1	N	FAC	* Indicators of hydric soil and wetland hydrology must be
2.	Phalaris arundinacea		7	N	FACW	present, unless disturbed or problematic.
3.	Carex sp.		15	N	FACW	
4.	Lysimachia nummularia		50	Υ	FACW	Definitions of Vegetation Strata:
5.	Typha latifolia		5	N	OBL	
6	Alisma subcordatum		7	N	OBL	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	Juncus tenuis		4	N	FAC	height (DBH), regardless of height.
8.	Juncus torreyi		3	N	FACW	
9.						Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.						rt. tan.
11.						
12.						Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
13.						and woody plants loss than 5.20 it. tall.
14.						
15.						Woody Vines - All woody vines greater than 3.28 ft. in height.
	Т	otal Cover =	92			
Woody Vine Strat	tum (Plot size: 30 ft radius)				_	
1.					-	
2.						
3.						Hydrophytic Vegetation Present ☑ Yes ☐ No
4.						
5.						
	Т	otal Cover =	0			
Remarks:		· · · · · · · · · · · · · · · · · · ·				

Additional Remarks:			



Project/Site:	Beacon Sta	ation Project					Stantec Project #:	193710350		Date:	05/02/23
Applicant:		Transmission Comp	anv Inc.				Clarico i roject #.	1007 10000		County:	Franklin
Investigator #1:			,	Invest	igator #2:	Malea C	Casey			State:	Ohio
Soil Unit:	Udorthents, lo	amy, steep					NWI/WWI Classification	: N/A		Wetland ID:	N/A
Landform:	Terrace			Loc	al Relief:	Linear				Sample Point:	SP10
Slope (%):	1-2		40.017141		ongitude:				WGS84	Community ID:	
		ditions on the site typ			/ear? (If no	, explain in r		☑ Yes □	No	Section:	
		or Hydrology □ sigr or Hydrology □ natι					Are normal circumsta  Yes	inces present? N⊎	,	Township: Range:	Dir:
SUMMARY OF		or riyurology = riatt	arany proble	illalic:			<u> </u>	INO		Range.	DII
Hydrophytic Ve	getation Pre	sent?		□ Yes	□ No			Hydric Soils	Present?		□ Yes ☑ No
Wetland Hydrol	•				□ No			Is This Samp	oling Point \	Within A Wetla	and? ■ Yes ■ No
Remarks:	Upland for	PFO and PSS Wetla	and 5.								
HYDROLOGY											
Wetland Hydr	ology Indica	ators (Check here if	indicators a	are not p	resent	)⊡					
<u>Primary</u>									Secondary:		
	A1 - Surface				B9 - Wate					B6 - Surface So	
	A2 - High Wa A3 - Saturation				B13 - Aqu B14 - True					B10 - Drainage C2 - Dry-Seaso	
	B1 - Water M				C1 - Hydro				_	C8 - Crayfish Bu	
	B2 - Sedimei	nt Deposits			C3 - Oxidi	ized Rhizo	spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift De						educed Iron			D1 - Stunted or	
	B4 - Algal Ma B5 - Iron Der				C6 - Rece C7 - Thin		duction in Tilled Soils			D2 - Geomorphi D5 - FAC-Neutr	
		on Visible on Aerial Ima	gery		D9 - Gaug					D3 - FAC-Neuti	ai rest
		y Vegetated Concave S			Other (Ex						
Field Observat	ions:										
Surface Water	Present?	□ Yes ☑ No	Depth:		(in.)			Wetland Hyd	drology Dr	ocont2 □	Yes ☑ No
Water Table Pr	esent?	□ Yes ☑ No	Depth:		(in.)			wetiand my	urology Fi	esent: u	ICS INO
Saturation Pres	ent?	□ Yes ☑ No	Depth:		(in.)						
Describe Record	lad Data (atr										
	ieu Dala (Sii	eam gauge, monitorin	ıg well, aeria	I photos,	previous i	nspection	ns), if available:		N/A		
Remarks:	ieu Dala (Sil	eam gauge, monitorin	ng well, aeria	l photos,	previous i	nspectior	ns), if available:		N/A		
	led Data (Sti	eam gauge, monitorin	ig well, aeria	l photos,	previous i	nspection	ns), if available:		N/A		
	ieu Data (Sti	eam gauge, monitorin	ng well, aeria	I photos,	previous i	nspection	ns), if available:		N/A		
Remarks:  SOILS  Map Unit Name	):	Udorthents, loamy,	steep		•	·					
Remarks:  SOILS  Map Unit Name Profile Descrip	etion (Describe to	Udorthents, loamy,	steep	osence of indical	•	·	Depletion, RM=Reduced Matrix, CS=Covered			, M=Matrix)	
Remarks:  SOILS  Map Unit Name  Profile Descrip  Top	e:  tion (Describe to  Bottom	Udorthents, loamy, the depth needed to document the indi	steep	osence of indical	tors.) (Type: C=Co	·	Depletion, RM=Reduced Matrix, CS=Covered Red	ox Features	ation: PL=Pore Lining	1	Texture
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth	etion (Describe to  Bottom  Depth	Udorthents, loamy, the depth needed to document the indi	steep cator or confirm the ab	esence of indical Matrix Moist)	ors.) (Type: C=Cd	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features %	ation: PL=Pore Lining Type	Location	(e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0	e:  Potion (Describe to Bottom Depth 3	Udorthents, loamy, the depth needed to document the indi  Horizon  1	steep cator or confirm the at  Color (N 10YR	Matrix Moist) 4/2	, (Type: C=Ci	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features % 	ation: PL=Pore Lining Type	Location 	(e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0 3	bition (Describe to  Bottom  Depth  3  18	Udorthents, loamy, the depth needed to document the individual Horizon	steep cator or confirm the ab Color (N 10YR 10YR	Matrix Moist) 4/2 4/3	% 100 93	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/8	ox Features %  7	Type	Location  PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0	e:  Potion (Describe to Bottom Depth 3	Udorthents, loamy, the depth needed to document the indi  Horizon  1	steep cator or confirm the at  Color (N 10YR	Matrix Moist) 4/2	, (Type: C=Ci	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features % 	ation: PL=Pore Lining Type	Location 	(e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0 3	Bottom Depth 3 18	Udorthents, loamy, the depth needed to document the individual Horizon  1 2	steep cator or confirm the ab Color (N 10YR 10YR	Matrix Moist) 4/2 4/3	% 100 93	oncentration, D=	Depietion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/8	% 7	Type C	Location  PL 	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3	btion (Describe to  Bottom Depth 3 18	Udorthents, loamy, the depth needed to document the indi  Horizon  1  2	steep cator or confirm the ab  Color (N 10YR 10YR	Matrix Moist) 4/2 4/3	% 100 93	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/8	% 7	Type C	Location PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3	Bottom Depth 3 18	Udorthents, loamy, the depth needed to document the indis	steep  Color (N  10YR  10YR	Matrix Moist) 4/2 4/3	% 100 93		Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/8	ox Features	Type C	Location PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3	Bottom Depth 3 18	Udorthents, loamy, the depth needed to document the indi  Horizon  1  2	Steep  Color (N  10YR  10YR	Matrix Moist) 4/2 4/3	% 100 93		Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/8	ox Features	Type C	Location PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric	Bottom Depth 3 18 Soil Field Ir	Udorthents, loamy, the depth needed to document the indis	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3	% 100 93 ot presen	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/8	ox Features	Type C s for Problem	Location PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3	Bottom Depth 3 18	Udorthents, loamy, the depth needed to document the individual of	Steep  Color (N  10YR  10YR	Matrix Moist) 4/2 4/3	% 100 93	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/8	ox Features	Type C s for Problem	Location PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric	Bottom Depth 3 18 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H	Udorthents, loamy, the depth needed to document the indi  Horizon  1  2  ndicators (check helpipedon istic	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3     ors are n	% 100 93 ot present S4 - Sand S6 - Stript	oncentration, D=  10YR t )2 y Gleyed I y Redox oped Matrixx	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/8 Matrix	ox Features	Type C	Location PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric	Bottom Depth 3 18 Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black H A4 - Hydroge	Udorthents, loamy, the depth needed to document the indi  Horizon  1  2	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3	% 100 93 ot presen' S4 - Sand S6 - Strip  F1 - Loam	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/8  Matrix ineral	ox Features	Type C for Problen A16 - Coars S F12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric	Bottom Depth 3 18 Soil Field Ir A1- Histosol A2 - Histic E1 A3 - Black H A4 - Hydroge A5 - Stratifier	Udorthents, loamy, the depth needed to document the indi  Horizon  1  2	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3	% 100 93 ot presen \$4 - Sand \$5 - Sand \$5 - Stripp F1 - Loam F2 - Loam	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/8 Matrix ineral Matrix	ox Features	Type C for Problen A16 - Coars S F12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric	Bottom Depth 3 18 Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black H 44 - Hydroge A5 - Stratiffee A10 - 2 cm M	Udorthents, loamy, the depth needed to document the individual of	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3	% 100 93 ot presen' S4 - Sand S6 - Strip  F1 - Loam	oncentration, D=  10YR t )2 y Gleyed I y Redox oed Matrix ny Muck M ny Gleyed eted Matrix	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/8  Matrix  Matrix  Matrix	ox Features	Type C for Problen A16 - Coars S F12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric	Bottom Depth 3 18 Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black H 44 - Hydroge A5 - Stratiffee A10 - 2 cm M	Udorthents, loamy, the depth needed to document the individual of	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3    ors are n	% 100 93	oncentration. D=  10YR t )2 y Gleyed I y Redox ped Matrix y Muck M yy Gleyed eted Matrix x Dark Su	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features	Type C for Problen A16 - Coars S F12 - Iron-M TF12 - Very	Location PL	(e.g. clay, sand, loam) clay loam clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric	Bottom Depth 3 18 Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	Udorthents, loamy, the depth needed to document the indi  Horizon  1  2	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3    Drs are n	% 100 93 ot presen' \$4 - Sand \$5 - Sand \$6 - Stripi F1 - Loam F2 - Loam F3 - Depile F6 - Redo	oncentration, D=  10YR t )2  y Gleyed I  y Redox ped Matrix y Muck M ny Gleyed eted Matrix x Dark Su eted Dark	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features	Type C for Problen A16 - Coast F12 - Iron-M TF12 - Very Other (Explain	Location PL	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric	Bottom Depth 3 18 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifiee A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mi	Udorthents, loamy, the depth needed to document the indi  Horizon  1  2  ndicators (check her pipedon istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3     Ors are n	% 100 93 oot presen \$4 - Sand \$6 - Stript F1 - Loam F2 - Loam F2 - Red0 F7 - Deple	oncentration, D=  10YR t )2  y Gleyed I  y Redox ped Matrix y Muck M ny Gleyed eted Matrix x Dark Su eted Dark	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features % 7 Indicators  Indicators of hydroph	Type  C	Location PL	(e.g. clay, sand, loam) clay loam clay loam es urface
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric	Bottom Depth 3 18 Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	Udorthents, loamy, the depth needed to document the indi  Horizon  1  2	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3    ors are n	% 100 93 oot presen \$4 - Sand \$6 - Stript F1 - Loam F2 - Loam F2 - Red0 F7 - Deple	oncentration, D=  10YR t )2  y Gleyed I  y Redox ped Matrix y Muck M ny Gleyed eted Matrix x Dark Su eted Dark	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features	Type  C	Location PL	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric	Bottom Depth 3 18 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifiee A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mi	Udorthents, loamy, the depth needed to document the indi  Horizon  1  2	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3     Ors are n	% 100 93 oot presen \$4 - Sand \$6 - Stript F1 - Loam F2 - Loam F2 - Red0 F7 - Deple	oncentration, D=  10YR t )2  y Gleyed I  y Redox ped Matrix y Muck M ny Gleyed eted Matrix x Dark Su eted Dark	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features % 7 Indicators  Indicators of hydroph	Type  C	Location PL	(e.g. clay, sand, loam) clay loam clay loam es urface
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 3 NRCS Hydric  Restrictive Layer (If Observed)	Bottom Depth 3 18 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifiee A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mi	Udorthents, loamy, the depth needed to document the indi  Horizon  1  2	Steep  Color (N  10YR  10YR	Matrix Moist)  4/2  4/3     Ors are n	% 100 93 oot presen \$4 - Sand \$6 - Stript F1 - Loam F2 - Loam F2 - Red0 F7 - Deple	oncentration, D=  10YR t )2  y Gleyed I  y Redox ped Matrix y Muck M ny Gleyed eted Matrix x Dark Su eted Dark	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features % 7 Indicators  Indicators of hydroph	Type  C	Location PL	(e.g. clay, sand, loam) clay loam clay loam es urface



Project/Site: Beacon Station Project Wetland ID: N/A Sample Point: SP10

VEGETATION	Species identified in all uppercase are non-native Plot size: 30 ft radius)	e species.	)		
Tree Stratum (F	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.	Juniperus virginiana	<u> </u>	Y	FACU	Dominance rest worksheet
2.					Number of Deminent Species that are ODL FACIAL or FAC:
3.					Number of Dominant Species that are OBL, FACW, or FAC:1(A)
3. 4.					Total Number of Dominant Species Across All Strata: 4 (B)
5.					Total Number of Dominant Species Across All Strata: 4 (B)
5. 6.	<del></del>				Descent of Deminant Species That Are ORL FACIAL or FAC: 250/ (A/D)
7.	 				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25%</u> (A/B)
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 0 x 1 = 0
10.	Total Cover :				FACW spp. 11 x 2 = 22
	Total Cover	O			FAC spp. 67 x 3 = 201
Sapling/Shrub S	tratum (Plot size: 15 ft radius)				FACU spp. 11 x 4 = 44
1.	Elaeagnus umbellata	7	Υ	UPL	UPL spp. 14
2.	Pyrus calleryana	5	Y	UPL	
3.					Total 103 (A) 337 (B)
4.					· · · · · · · · · · · · · · · · · · ·
5.					Prevalence Index = B/A = 3.272
6.					· — ·
7.			-		
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☑ No Dominance Test is > 50%
	Total Cover :	= 12			□ Yes ☑ No Prevalence Index is ≤ 3.0 *
					□ Yes ☑ No Morphological Adaptations (Explain) *
Herb Stratum (F	Plot size: 5 ft radius)				□ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
1.	Euthamia graminifolia	4	N	FACW	
2.	Daucus carota	2	N	UPL	* Indicators of hydric soil and wetland hydrology must be
3.	Phalaris arundinacea	7	N	FACW	present, unless disturbed or problematic.
4.	Plantago lanceolata	6	N	FACU	Definitions of Vegetation Strata:
5.	Prunella vulgaris	2	N	FAC	
6	Poa pratensis	65	Υ	FAC	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.					height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover :				····•
	15.00				
Woody Vine Stra	atum (Plot size: 30 ft radius)				
1.	-				
2.					
3.					Hydrophytic Vegetation Present □ Yes □ No
4.					Tigarophysio rogotation i rocont = 100 5 110
5.					
<u>.                                    </u>	Total Cover :				
Remarks:	1000 0000				

Additional Remarks:			



Project/Site:	Paggan Sta	ation Project					Stantec Project #:	193710350		Date:	05/02/23
Applicant:		Transmission Comp	any Inc				Stantec Project #.	1937 10330		County:	Franklin
Investigator #1:			arry inc.	Invest	tigator #2:	Malea (	asev.			State:	Ohio
Soil Unit:		clay loam, 0 to 2 percent s	slones	IIIVOSI	ilgator #2.	Iviaica C	WI/WWI Classification	n: N/A			Wetland 6
Landform:	Depression		0.0000	Loc	cal Relief:					Sample Point:	
Slope (%):	0		40.017715		onaitude:			Datum:	WGS84	Community ID:	
	drologic cond	litions on the site typ			year? (If no	, explain in i	emarks)	☑ Yes □	No	Section:	
		or Hydrology   sign					Are normal circumsta	ances present?	1	Township:	
Are Vegetation	□ , Soil □ , o	or Hydrology 🗆 natı	urally proble	matic?			Yes	N□		Range:	Dir:
<b>SUMMARY OF</b>	FINDINGS										
Hydrophytic Ve	getation Pres	sent?		Yes	s 🗆 No			Hydric Soils I	Present?		
Wetland Hydrol	logy Present	?		✓ Yes	s 🗆 No			Is This Samp	oling Point \	Within A Wetla	and? <b>□ Yes ■ No</b>
Remarks:											
HYDROLOGY											
Wetland Hydr	ology Indica	ators (Check here if	indicators a	are not p	resent	)::					
Primary	<u>:</u>	•		•		,			Secondary:		
Ø	A1 - Surface				B9 - Wate					B6 - Surface So	
✓	A2 - High Wa				B13 - Aqu					B10 - Drainage	
	A3 - Saturation				B14 - True					C2 - Dry-Seaso	
<b>=</b>	B1 - Water M B2 - Sedimer				C1 - Hydr	•	spheres on Living Roots			C8 - Crayfish B	urrows Visible on Aerial Imagery
	B3 - Drift Dep						educed Iron				Stressed Plants
	B4 - Algal Ma						duction in Tilled Soils		_	D2 - Geomorph	
	B5 - Iron Dep				C7 - Thin	Muck Surf	ace			D5 - FAC-Neutr	
		on Visible on Aerial Ima	0 ,		D9 - Gauç						
	B8 - Sparsely	Vegetated Concave S	urface		Other (Ex	plain in Re	marks)				
Field Observat											
Surface Water		☑ Yes □ No	Depth:		(in.)			Wetland Hyd	drology Pr	esent?	Yes □ No
Water Table Pr		☑ Yes □ No	Depth:		(in.)				0.0 97	_	.55
Saturation Pres	ent?	☑ Yes □ No	Depth:	0	(in.)						
Describe Record											
Describe Record	ied Data (stre	eam gauge, monitorir	ng well, aeria	I photos,	, previous i	nspection	s), if available:		N/A		
Remarks:	ied Data (stre	eam gauge, monitorir	ng well, aeria	l photos,	, previous i	nspection	s), if available:		N/A		
	ied Data (stre	eam gauge, monitorir	ng well, aeria	l photos,	, previous i	inspection	s), if available:		N/A		
	ied Data (stre	eam gauge, monitorir	ng well, aeria	l photos,	, previous i	inspection	s), if available:		N/A		
Remarks:		eam gauge, monitorir  Kokomo silty clay lo		•	•	nspection	s), if available:		N/A		
Remarks:  SOILS  Map Unit Name	): ::	Kokomo silty clay lo	oam, 0 to 2 p	percent s	slopes	·	is), if available:  Depletion, RM=Reduced Matrix, CS=Coverec			, M=Matrix)	
Remarks:  SOILS  Map Unit Name	): ::	Kokomo silty clay lo	pam, 0 to 2 p	percent s	slopes	·	Depletion, RM=Reduced Matrix, CS=Covered			, M=Matrix)	Texture
Remarks:  SOILS  Map Unit Name Profile Descrip	e: otion (Describe to	Kokomo silty clay lo	pam, 0 to 2 p	percent subsence of indical	slopes	·	Depletion, RM=Reduced Matrix, CS=Covered	d/Coated Sand Grains; Loca	ation: PL=Pore Lining	, M=Matrix)	Texture (e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name  Profile Descrip  Top	e:  Bottom	Kokomo silty clay lo	pam, 0 to 2 p	percent subsence of indical	slopes ators.) (Type: C=C	·	Depletion, RM=Reduced Matrix, CS=Covered	d/Coated Sand Grains; Loca			
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth	e: otion (Describe to) Bottom Depth	Kokomo silty clay lothe depth needed to document the indi	pam, 0 to 2 picator or confirm the ab	percent sence of indical Matrix Moist)	slopes stors.) (Type: C=C	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	d/Coated Sand Grains; Loca dox Features %	ation: PL=Pore Lining	Location	(e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0	e:  Dtion (Describe to)  Bottom  Depth  18	Kokomo silty clay lothe depth needed to document the indiction  Horizon	Color (N	Dercent space of indical Matrix Moist)  4/2	slopes stors.) (Type: C=C	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	d/Coated Sand Grains: Loca dox Features % 15	Type	Location M	(e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0	Bottom Depth 18	Kokomo silty clay lothe depth needed to document the indi  Horizon  1	Color (N	Dercent space of indica Matrix Moist)  4/2	slopes stors.) (Type: C=C	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	d/Coated Sand Grains: Local dox Features % 15	Type C	Location M 	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0	Bottom Depth 18	Kokomo silty clay lothe depth needed to document the indi Horizon 1	coam, 0 to 2 picator or confirm the ab	percent seence of indical Matrix Moist)  4/2	slopes stors.) (Type: C=C	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	d/Coated Sand Grains: Local dox Features % 15 	Type C	Location M 	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0	btion (Describe to Depth 18	Kokomo silty clay lothe depth needed to document the indi  Horizon  1	coam, 0 to 2 pricator or confirm the attended to 10 yr Color (N 10 yr	percent sessence of indical Matrix Moist)  4/2	Slopes   S	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	d/Coated Sand Grains; Localox Features % 15	Type C	Location M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0	Bottom Depth 18	Kokomo silty clay lot the depth needed to document the indi  Horizon  1	coam, 0 to 2 picator or confirm the at	Dercent subsence of indical Matrix Moist)  4/2	Slopes Mors.) (Type: C=C  %  85	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	d/Coated Sand Grains; Localox Features % 15	Type C	Location M	(e.g. clay, sand, loam)  clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0	Bottom Depth 18	Kokomo silty clay lothe depth needed to document the indi Horizon 1	coam, 0 to 2 pricator or confirm the attended to 10 yr color (N 10 yr color	Dercent subsence of indical Matrix Moist)  4/2	Slopes   S	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	d/Coated Sand Grains; Localox Features % 15	Type C	Location M	(e.g. clay, sand, loam)  clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0	Bottom Depth 18	Kokomo silty clay lothe depth needed to document the indi Horizon 1	color (N 10YR	Dercent sesse of indical Matrix Moist)  4/2	Slopes   S	10YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	dd/Coated Sand Grains; Localox Features % 15	Type C	Location M	(e.g. clay, sand, loam)  clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0	Bottom Depth 18	Kokomo silty clay lothe depth needed to document the indi Horizon 1	color (N 10YR	Dercent sesse of indical Matrix Moist)  4/2	Slopes   S	10YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6	d/Coated Sand Grains; Localox Features % 15 Indicators	Type C for Problem	Location M	(e.g. clay, sand, loam)  clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth 18 Soil Field In A1- Histosol A2 - Histic Ep	Kokomo silty clay lothe depth needed to document the indi Horizon  1 dicators (check he	color (N 10YR	Dercent sesse of indicate Matrix Moist)  4/2	slopes thors.) (Type: C=C  % 85	10YR t ):j	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix	d/Coated Sand Grains: Local dox Features  % 15 Indicators	Type C for Problem A16 - Coast S7 - Dark Si	Location  M	(e.g. clay, sand, loam)  clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth  18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi	Kokomo silty clay lothe depth needed to document the indi Horizon  1 dicators (check he objedon stic	color (N 10YR	Matrix Moist)  4/2	slopes  white states and selection in the states are states as the states are states as the states are states as the states are states are states as the states are s	noncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix	d/Coated Sand Grains; Local dox Features % 15 Indicators	Type C for Problem A16 - Coast S7 - Dark St F12 - Iron-M	Location  M         matic Soils   arrace langanese Mass	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  O NRCS Hydric	Bottom Depth 18 Soil Field In A1- Histosol A2 - Histic Eç A3 - Black Hi A4 - Hydroge	Kokomo silty clay lothe depth needed to document the indi  Horizon  1  idicators (check he objedon stichen Sulfide	color (N 10YR	Matrix Moist)  4/2	slopes  % 85 oot presen S4 - Sand S5 - Sand S6 - Strip F1 - Loam	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix	d/Coated Sand Grains; Localox Features % 15 Indicators	Type C	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  O NRCS Hydric	Bottom Depth 18 Soil Field In A1- Histosol A2 - Histic Eq A3 - Black Hi A4 - Hydroge A5 - Stratified	Kokomo silty clay lo he depth needed to document the indi  Horizon  1 dicators (check he bipedon stic en Sulfide d Layers	color (N 10YR	Dercent sesse of indicate Matrix Moist)  4/2	slopes  white state of the stat	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix ineral Matrix	d/Coated Sand Grains; Localox Features % 15 Indicators	Type C	Location  M         matic Soils   arrace langanese Mass	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiec A10 - 2 cm M	Kokomo silty clay lo the depth needed to document the indi Horizon  1	color (N 10YR	Matrix Moist)  4/2	slopes  % 85 sot presen S4 - Sand S5 - Sand S6 - Stripp F1 - Loam F3 - Deple	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix ineral Matrix	d/Coated Sand Grains; Localox Features % 15 Indicators	Type C	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  O NRCS Hydric	Bottom Depth 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiec A10 - 2 cm M	Kokomo silty clay lothe depth needed to document the indiction  1 dicators (check he bipedon stice in Sulfide di Layers luck and Below Dark Surface	color (N 10YR	Matrix Moist)  4/2	slopes  white state of the stat	oncentration. D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix ineral Matrix : rface	d/Coated Sand Grains; Localox Features % 15 Indicators	Type C	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth  18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiec A10 - 2 cm M A11 - Deplete	Kokomo silty clay lothe depth needed to document the indi  Horizon  1	color (N 10YR	Matrix Moist)  4/2      Dors are n	% 85 S4 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix ineral Matrix inface Surface Surface	d/Coated Sand Grains; Localox Features % 15 Indicators	Type C	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M	Kokomo silty clay lothe depth needed to document the indi  Horizon  1	color (N 10YR	Matrix Moist)  4/2	% 85	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix ineral Matrix inface Surface Surface	d/Coated Sand Grains; Localox Features % 15 Indicators	Type C	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth  18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiec A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm ML	Kokomo silty clay lot the depth needed to document the indit Horizon  1	color (N 10YR	Matrix Moist)  4/2	% 85	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix ineral Matrix inface Surface Surface	d/Coated Sand Grains; Local Cox Features  % 15 Indicators  ¹ Indicators of hydrophy	Type C for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location  M	(e.g. clay, sand, loam)  clay loam          es  urface
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric  Restrictive Layer (If Observed)	Bottom Depth 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M	Kokomo silty clay lot the depth needed to document the indit Horizon  1	color (N 10YR	Matrix Moist)  4/2	% 85	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix ineral Matrix inface Surface Surface	d/Coated Sand Grains; Localox Features % 15 Indicators	Type C for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth  18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiec A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm ML	Kokomo silty clay lot the depth needed to document the indit Horizon  1	color (N 10YR	Matrix Moist)  4/2	% 85	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix ineral Matrix inface Surface Surface	d/Coated Sand Grains; Local Cox Features  % 15 Indicators  ¹ Indicators of hydrophy	Type C for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location  M	(e.g. clay, sand, loam)  clay loam          es  urface
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric  Restrictive Layer (If Observed)	Bottom Depth  18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiec A10 - 2 cm M A11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm ML	Kokomo silty clay lot the depth needed to document the indit Horizon  1	color (N 10YR	Matrix Moist)  4/2	% 85	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 6/6 Matrix ineral Matrix inface Surface Surface	d/Coated Sand Grains; Local Cox Features  % 15 Indicators  ¹ Indicators of hydrophy	Type C for Problem A16 - Coast S7 - Dark St F12 - Iron-M TF12 - Very Other (Expla	Location  M	(e.g. clay, sand, loam)  clay loam          es  urface



Additional Remarks:

## WETLAND DETERMINATION DATA FORM Midwest Region

Project/Site: Beacon Station Project Wetland ID: Wetland 6 Sample Point: SP11

VEGETATION		case are non-native	species.)	)		
Tree Stratum (F	Plot size: 30 ft radius)		٠, ٥	<u> </u>		Dominance Test Worksheet
4	Species Name	=		Dominant	Ind.Status	Dominance rest worksneet
1.	Frangula alnus		5	Y Y	FACW	N I CD : 10 : 11 ODI FAON FAO (A)
2. 3.	Acer negundo		6		FAC	Number of Dominant Species that are OBL, FACW, or FAC:3(A)
3. 4.						Total Number of Demiserat Consider Assess All Charter 2 (D)
						Total Number of Dominant Species Across All Strata: (B)
5. 6.	<u></u>					Descript of Descript Country That Are ORL FACIAL as FAC: 100% (A/R)
7.	<del></del>					Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
8.						Prevalence Index Worksheet
9.						Total % Cover of: Multiply by:
10.						OBL spp. 4 x 1 = 4
10.	<del></del>	Total Cover =	11			FACW spp. 102
		Total Gover				FAC spp. $\frac{102}{6}$ $\times 3 = \frac{204}{18}$
Sapling/Shrub S	tratum (Plot size: 15 ft radius)					FACU spp. 0 x 4 = 0
1.						UPL spp. 0 x 5 = 0
2.						
3.						Total <u>112</u> (A) <u>226</u> (B)
4.					-	
5.						Prevalence Index = B/A = 2.018
6.						
7.					-	
8.					-	Hydrophytic Vegetation Indicators:
9.					-	☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					-	
		Total Cover =	0			Yes □ No Prevalence Index is ≤ 3.0 *
						☐ Yes ☑ No Morphological Adaptations (Explain) *
Herb Stratum (P	Plot size: 5 ft radius)					☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
1.	Lysimachia nummularia		65	Υ	FACW	* Indicators of hydric soil and wetland hydrology must be
2.	Solidago patula		4	N	OBL	present, unless disturbed or problematic.
3.	Juncus tenuis		7	N	FACW	
4.	Carex sp.		15	N	FACW	Definitions of Vegetation Strata:
5.	Agrimonia parviflora		3	N	FACW	
6	Phalaris arundinacea		7	N	FACW	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.						height (DBH), regardless of height.
8.						
9.						Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.						16. con.
11.						
12.						Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
13.						and woody planto 1000 than 0.20 ft. tall.
14.						
15.				-		Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	101			
NA 1 1 2 5 5	(D) ( '- CO '' '' )					
	atum (Plot size: 30 ft radius)					
1. 2.						
2. 3.						Hydrophytia Vagetation Present G. Vag. G. No.
3. 4.	 					Hydrophytic Vegetation Present ☑ Yes ☐ No
4. 5.	<del></del>					
J.	<del></del> -	Total Cover =	0			
Remarks:		TOTAL COVEL -	U			
. tomains.						



Project/Site: Applicant:		ation Project Transmission Comp	any Inc.				Stantec Project #:	193710350		Date: County:	05/02/23 Franklin
Investigator #1:			•	Invest	igator #2:					State:	Ohio
Soil Unit:		clay loam, 0 to 2 percent s	slopes				IWI/WWI Classification	: N/A		Wetland ID:	N/A
Landform:	Terrace	1 66 1			al Relief:			Б.,	W0004	Sample Point:	
Slope (%):	0 Irologia con	:Latitude ditions on the site typ	40.017637		ongitude:			□ Yes □	WGS84 No	Community ID:	UPL 
		or Hydrology □ sign			year : (if no	, explain in i	Are normal circumsta			Section: Township:	
		or Hydrology □ sigi or Hydrology □ natι					✓ Yes	NU		Range:	Dir:
SUMMARY OF		or riyarology – riak	arany proble	mano.			_ 100	110		rango.	DII.
Hydrophytic Ve		sent?		□ Yes	. ☑ No			Hydric Soils	Present?		□ Yes ☑ No
Wetland Hydrol	0				- No					Within A Wetla	and? ■ Yes ■ No
Remarks:											
HYDROLOGY											
Wetland Hydr	ology Indic	ators (Check here if	indicators a	are not p	resent	)⊡					
Primary	:								Secondary:		
	A1 - Surface				B9 - Wate					B6 - Surface So	-
	A2 - High Wa A3 - Saturati				B13 - Aqu B14 - True					B10 - Drainage C2 - Dry-Seaso	
	B1 - Water N				C1 - Hydro					C8 - Crayfish B	
	B2 - Sedime				,	0	spheres on Living Roots			•	Visible on Aerial Imagery
	B3 - Drift De						duced Iron			D1 - Stunted or	
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorph	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutr	al Test
		on Visible on Aerial Ima y Vegetated Concave S			D9 - Gaug Other (Ex						
	20 opa.00.	, regenated contains o		_	0 ti 10. (EX	p.a	ao)				
Field Observat	ions:										
Surface Water		□ Yes ☑ No	Depth:		(in.)						
Water Table Pr		□ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Pr	esent? -	Yes ☑ No
Saturation Pres		□ Yes ☑ No	Depth:		(in.)						
Doscribo Pocoro	lad Data (atr				( ,						
		oom gougo monitorin	a wall aaria	Inhotoo	provious i	noncotion	a) if available:		NI/A		
	ied Data (Str	eam gauge, monitorin	ıg well, aeria	l photos,	previous i	nspectior	s), if available:		N/A		
Remarks:	ied Data (Str	eam gauge, monitorin	ig well, aeria	l photos,	previous i	nspectior	s), if available:		N/A		
Remarks:	led Data (Sti	eam gauge, monitorin	ig well, aeria	I photos,	previous i	nspection	s), if available:		N/A		
Remarks:	,				•	nspection	s), if available:		N/A		
Remarks:  SOILS  Map Unit Name	): ::	Kokomo silty clay lo	pam, 0 to 2 p	percent s	slopes	·		U/Coated Sand Grains; Loca		, M=Matrix)	
Remarks:  SOILS  Map Unit Name	): ::	Kokomo silty clay lo	pam, 0 to 2 p	percent s	slopes	·	Depletion, RM=Reduced Matrix, CS=Covered	#Coated Sand Grains; Loca OX Features		, M=Matrix)	Texture
Remarks:  SOILS  Map Unit Name Profile Descrip	e: otion (Describe to	Kokomo silty clay lo	pam, 0 to 2 p	percent subsence of indicate	slopes	·	Depletion, RM=Reduced Matrix, CS=Covered			, M=Matrix)  Location	Texture (e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name  Profile Descrip  Top	e:  Stion (Describe to Bottom	Kokomo silty clay lot the depth needed to document the indi	pam, 0 to 2 p	percent subsence of indicate	slopes tors.) (Type: C=Cd	·	Depletion, RM=Reduced Matrix, CS=Covered Red	ox Features	ation: PL=Pore Lining	1	
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth	etion (Describe to Bottom Depth	Kokomo silty clay lot the depth needed to document the indi Horizon	pam, 0 to 2 pam, 0	percent subsence of indicate Matrix Moist)	slopes tors.) (Type: C=Cd	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features %	ation: PL=Pore Lining	Location	(e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0	e:  Dtion (Describe to Bottom Depth 18	Kokomo silty clay lot the depth needed to document the indi Horizon	cam, 0 to 2 pcator or confirm the at	Dercent sobsence of indicate Matrix Moist) 4/3	slopes tors.) (Type: C=Cr	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/6	ox Features % 30	ation: PL=Pore Lining Type C	Location M	(e.g. clay, sand, loam)
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0	Bottom Depth 18	Kokomo silty clay lot the depth needed to document the indi Horizon 1	Color (N	Dercent separate of indicate Matrix Moist)  4/3	slopes tors.) (Type: C=Cri % 70	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/6	ox Features % 30 	Type C	Location M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0	btion (Describe to  Bottom Depth 18	Kokomo silty clay lot the depth needed to document the indistriction  Horizon  1	cam, 0 to 2 parator or confirm the ab	percent seasons of indicated Matrix Moist)  4/3	Slopes tors.) (Type: C=Ci  % 70	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/6	% 30	Type C	Location M 	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth 0	btion (Describe to  Bottom Depth 18	Kokomo silty clay lot the depth needed to document the indi Horizon  1	cam, 0 to 2 pcator or confirm the ab	Dercent sosence of Indical Matrix Moist) 4/3	Slopes tors.) (Type: C=Ci  % 70	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6	% 30	Type C	Location M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  O	Bottom Depth 18	Kokomo silty clay lot the depth needed to document the individual to the depth needed to document the individual to the	cam, 0 to 2 pcator or confirm the at	Dercent space of indical Matrix Moist)  4/3	Slopes tors.) (Type: C=Cr  % 70	10YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6	ox Features	Type C	Location M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0	Bottom Depth 18	Kokomo silty clay lot the depth needed to document the indi	cator or confirm the ab	Matrix Moist)  4/3	%   70   -	10YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6	ox Features	Type C	Location M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth 18 Soil Field Ir	Kokomo silty clay lot the depth needed to document the individual to the depth needed to document the individual to the	cator or confirm the ab	Matrix Moist)  4/3	%   70             ot present	10YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/6	ox Features	Type C s for Problem	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth 18 Soil Field Ir	Kokomo silty clay lot the depth needed to document the indi  Horizon  1	cator or confirm the ab	Dercent sosence of Indicators Matrix Moist)  4/3	%   70	10YR t )2	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/6	ox Features	Type C	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth 18 Soil Field Ir	Kokomo silty clay lot the depth needed to document the indi  Horizon  1	cator or confirm the ab	Matrix Moist)  4/3	%   70             ot present	10YR t )2 y Gleyed I y Redox	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6        Matrix	ox Features	Type C	Location  M	(e.g. clay, sand, loam)  clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  O NRCS Hydric	Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge	Kokomo silty clay lot the depth needed to document the indi  Horizon  1	cator or confirm the ab	Matrix Moist)  4/3	%   70   -	10YR t )2 y Gleyed x y Redox y y Muck M	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6       Matrix  ineral	ox Features	Type C sfor Problen A16 - Coast F12 - Iron-M TF12 - Very	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  O NRCS Hydric	Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydrogd A5 - Stratifie	Kokomo silty clay lot the depth needed to document the indi  Horizon  1	cator or confirm the ab	Matrix Moist)  4/3	%   70	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6      Matrix  ineral Matrix	ox Features	Type C sfor Problen A16 - Coast F12 - Iron-M TF12 - Very	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H 44 - Hydroge A5 - Stratifie A10 - 2 cm M	Kokomo silty clay lot the depth needed to document the indi  Horizon  1  ndicators (check her pipedon istic en Sulfide d Layers Muck	cator or confirm the ab	Matrix Moist)  4/3     ors are n	%   70	10YR t )2 y Gleyed I y Redox oed Matrix ny Muck M ny Gleyed eted Matrix	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/6 Matrix ineral Matrix	ox Features	Type C sfor Problen A16 - Coast F12 - Iron-M TF12 - Very	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  O NRCS Hydric	Bottom Depth  18 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet	Kokomo silty clay lot the depth needed to document the indi  Horizon  1 ndicators (check her pipedon istic en Sulfide d Layers //uck ed Below Dark Surface	cator or confirm the ab	Matrix Moist)  4/3	Slopes   W	oncentration. D=  10YR t )2 y Gleyed I y Redox ped Matrix y Muck M yy Gleyed eted Matrix x Dark Su	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6      Matrix  ineral Matrix  inface	ox Features	Type C sfor Problen A16 - Coast F12 - Iron-M TF12 - Very	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H 44 - Hydroge A5 - Stratifie A10 - 2 cm M	Kokomo silty clay lot the depth needed to document the indi  Horizon  1 ndicators (check hele pipedon istic en Sulfide d Layers //uck ed Below Dark Surface Dark Surface	cator or confirm the ab	Matrix Moist)  4/3     Dors are n	%   70	10YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6      Matrix  ineral Matrix  inface Surface	ox Features	Type C sfor Problen A16 - Coast F12 - Iron-M TF12 - Very	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	Kokomo silty clay lot the depth needed to document the indi  Horizon  1 ndicators (check hele pipedon istic en Sulfide d Layers //uck ed Below Dark Surface Dark Surface	cator or confirm the ab	Matrix Moist)  4/3	%   70	10YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6      Matrix  ineral Matrix  inface Surface	ox Features	Type C sfor Problen A16 - Coast F12 - Iron-M TF12 - Very Other (Explain	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	Kokomo silty clay lot the depth needed to document the indi  Horizon  1	cator or confirm the ab	Matrix Moist)  4/3	%   70	10YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6      Matrix  ineral Matrix  inface Surface	ox Features	Type C	Location  M	(e.g. clay, sand, loam) clay loam
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric  Restrictive Layer (If Observed)	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mi	Kokomo silty clay lot the depth needed to document the indi  Horizon  1	cator or confirm the ab	Matrix Moist)  4/3	%   70	10YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6      Matrix  ineral Matrix  inface Surface	ox Features % 30 Indicators  Indicators of hydroph	Type C	Location  M	(e.g. clay, sand, loam)  clay loam          es  urface
Remarks:  SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mi	Kokomo silty clay lot the depth needed to document the indi  Horizon  1	cator or confirm the ab	Matrix Moist)  4/3	%   70	10YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/6      Matrix  ineral Matrix  inface Surface	ox Features % 30 Indicators  Indicators of hydroph	Type C	Location  M	(e.g. clay, sand, loam)  clay loam          es  urface



Project/Site: Beacon Station Project Wetland ID: N/A Sample Point: SP12

2. Quercu 3 4 5 6 7 8 10  Sapling/Shrub Stratum (Plot 1. Lonice 2. Rosa n 3 4 5 6 7 8 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	s Name ula alnus us rubra  Total Cover =	7 5 12 15 7	<u>Ромінант</u> У	Ind.Status FACW FACU	Number of Dominant Species that are OBL, FACW, or FAC:1(A)  Total Number of Dominant Species Across All Strata:8(B)  Percent of Dominant Species That Are OBL, FACW, or FAC:13%(A/B)  Prevalence Index Worksheet  Total % Cover of:
1. Frangu 2. Quercu 3 4 5 6 7 8 10  Sapling/Shrub Stratum (Plot 1. Lonicei 2. Rosa n 3 4 5 6 7 8 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	ula alnus us rubra  Total Cover = tt size: 15 ft radius) ura mackii multiflora	7 5 12 15 7	Y Y	FACW FACU	Number of Dominant Species that are OBL, FACW, or FAC:
2. Quercu 3 4 5 6 7 8 10  Sapling/Shrub Stratum (Plot 1. Lonice 2. Rosa n 3 4 5 6 7 8 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	Total Cover =  t size: 15 ft radius)  ra mackii  multiflora	5	Y	FACU	Total Number of Dominant Species Across All Strata: 8 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 13% (A/B)  Prevalence Index Worksheet  Total % Cover of: Multiply by:  OBL spp. 0
3 4 5 6 7 8 9 10  Sapling/Shrub Stratum (Plot 1. Lonice) 2. Rosa n 3 4 5 6 7 8 9 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	Total Cover = t size: 15 ft radius) tra mackii multiflora	15 7 	Y Y		Total Number of Dominant Species Across All Strata: 8 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 13% (A/B)  Prevalence Index Worksheet  Total % Cover of: Multiply by:  OBL spp. 0
4 5 6 7 8 9 10  Sapling/Shrub Stratum (Plot 1. Lonicel 2. Rosa n 3 4 5 6 7 8 9 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	t size: 15 ft radius) ora mackii multiflora	15 7 	Y Y	            	Prevalence Index Worksheet    Total % Cover of:
5 6 7 8 9 10  Sapling/Shrub Stratum (Plot 1. Lonicel 2. Rosa n 3 4 5 6 7 8 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	t size: 15 ft radius) ora mackii multiflora	15 7 	Y Y		Prevalence Index Worksheet    Total % Cover of:
6 7 8 9 10  Sapling/Shrub Stratum (Plot 1. Lonicel 2. Rosa n 3 4 5 6 7 8 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	t size: 15 ft radius) ora mackii multiflora	15 7 	Y Y	         	Prevalence Index Worksheet           Total % Cover of:         Multiply by:           OBL spp.         0         x 1 = 0           FACW spp.         21         x 2 = 42           FAC spp.         0         x 3 = 0           FACU spp.         44         x 4 = 176           UPL spp.         22         x 5 = 110           Total 87 (A) 328 (B)           Prevalence Index = B/A = 3.770           Hydrophytic Vegetation Indicators:           □ Yes         □ No Rapid Test for Hydrophytic Vegetation
7 8 9 10  Sapling/Shrub Stratum (Plot 1. Lonicer 2. Rosa n 3 4 5 6 7 8 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	t size: 15 ft radius) ora mackii multiflora	15 7 	Y Y Y		Prevalence Index Worksheet           Total % Cover of:         Multiply by:           OBL spp.         0         x 1 = 0           FACW spp.         21         x 2 = 42           FAC spp.         0         x 3 = 0           FACU spp.         44         x 4 = 176           UPL spp.         22         x 5 = 110           Total 87 (A) 328 (B)           Prevalence Index = B/A = 3.770           Hydrophytic Vegetation Indicators:           □ Yes         □ No Rapid Test for Hydrophytic Vegetation
8 9 10  Sapling/Shrub Stratum (Plot 1. Lonicer 2. Rosa n 3 4 5 6 7 8 9 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	t size: 15 ft radius) ora mackii multiflora	15 7 	Y Y Y		Total % Cover of:       Multiply by:         OBL spp.       0       x 1 = 0         FACW spp.       21       x 2 = 42         FAC spp.       0       x 3 = 0         FACU spp.       44       x 4 = 176         UPL spp.       22       x 5 = 110         Total 87       (A) 328       (B)         Prevalence Index = B/A = 3.770         Hydrophytic Vegetation Indicators:         □ Yes       □ No       Rapid Test for Hydrophytic Vegetation
9 10 110 Sapling/Shrub Stratum (Plot 1. Lonicei 2. Rosa n 3 4 5 6 7 8 9 10 Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	t size: 15 ft radius) ora mackii multiflora	15 7 	Y Y 	  FACU   	Total % Cover of:       Multiply by:         OBL spp.       0       x 1 = 0         FACW spp.       21       x 2 = 42         FAC spp.       0       x 3 = 0         FACU spp.       44       x 4 = 176         UPL spp.       22       x 5 = 110         Total 87       (A) 328       (B)         Prevalence Index = B/A = 3.770         Hydrophytic Vegetation Indicators:         □ Yes       □ No       Rapid Test for Hydrophytic Vegetation
10  Sapling/Shrub Stratum (Plot  1. Lonice  2. Rosa n  3  4  5  6  7  8  9  10  Herb Stratum (Plot size: 5 f  1. Solidag  2. Trifoliu  3. Daucus  4. Erigero	t size: 15 ft radius) ra mackii multiflora	15 7 	Y Y 	 UPL FACU   	OBL spp. 0
Sapling/Shrub Stratum (Plot	t size: 15 ft radius) ra mackii multiflora	15 7    	Y Y   	UPL FACU    	FACW spp. 21
1. Lonicer 2. Rosa n 3 4 5 6 7 8 10 Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	t size: 15 ft radius) ra mackii multiflora	15 7 	Y	FACU	FAC spp. 0
1. Lonicer 2. Rosa n 3 4 5 6 7 8 10 Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	era mackii multiflora	7     	Y	FACU	FACU spp. 44
1. Lonicer 2. Rosa n 3 4 5 6 7 8 10 Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	era mackii multiflora	7     	Y	FACU	UPL spp
2. Rosa n 3 4 5 6 7 8 10 Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	multiflora	7     	Y	FACU	Total 87 (A) 328 (B)  Prevalence Index = B/A = 3.770  Hydrophytic Vegetation Indicators:  Prevalence Index = B/A = 3.770  No Rapid Test for Hydrophytic Vegetation
3 4 5 6 7 8 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero		    	   	    	Prevalence Index = B/A = 3.770  Hydrophytic Vegetation Indicators:   No Rapid Test for Hydrophytic Vegetation
4 5 6 7 8 9 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	Total Cover =	    	   	   	Prevalence Index = B/A = 3.770  Hydrophytic Vegetation Indicators:   No Rapid Test for Hydrophytic Vegetation
5 6 7 8 9 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	Total Cover =	   	  	   	Hydrophytic Vegetation Indicators:   No Rapid Test for Hydrophytic Vegetation
6 7 8 9 10  Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	Total Cover =	   	  	  	Hydrophytic Vegetation Indicators:   No Rapid Test for Hydrophytic Vegetation
7 8 9 10 Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifolium 3. Daucus 4. Erigero	Total Cover =	  	  	  	☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
8 9 10 Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifolium 3. Daucus 4. Erigero	Total Cover =	 			☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
9 10 Herb Stratum (Plot size: 5 f 1. Solidag 2. Trifolium 3. Daucus 4. Erigero	Total Cover =				☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5 f  1. Solidag 2. Trifoliu. 3. Daucus 4. Erigero	Total Cover =				_ , , , , ,
Herb Stratum (Plot size: 5 f  1. Solidag 2. Trifoliu. 3. Daucus 4. Erigero	Total Cover =				☐ Yes ☑ No Dominance Test is > 50%
1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	Total Covel –	22			
1. Solidag 2. Trifoliu 3. Daucus 4. Erigero					
1. Solidag 2. Trifoliu 3. Daucus 4. Erigero	6 P. A				☐ Yes ☐ No Morphological Adaptations (Explain) *
2. Trifolium 3. Daucus 4. Erigero		4.5	V	EACH	□ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
<ol> <li>Daucus</li> <li>Erigero</li> </ol>	go canadensis	15 5	Y	FACU	* Indicators of hydric soil and wetland hydrology must be
4. Erigero	•	5 7	Y	FACU UPL	present, unless disturbed or problematic.
		12	Y	FACU	Definitions of Vegetation Strata:
5. Agrimo	onia parviflora	3	N	FACW	Deminitions of Vegetation Strata.
	<u> </u>	7			Troo
	ris arundinacea	4	N N	FACW	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
8	culus abortivus			FACW	noight (BBH), regardood of noight.
					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
9					ft. tall.
10 11					
10					Herb - All herbaceous (non-woody) plants, regardless of size,
					and woody plants less than 3.28 ft. tall.
13 14					
15					Woody Vines - All woody vines greater than 3.28 ft. in height.
10	Total Carran				Woody Villes - 7th Woody Villes grouter than 5.25 ft. in height.
	Total Cover =	53			
Mondy Vina Ctu-ture /DL 1	size, 20 ft radius)				
Noody Vine Stratum (Plot s	size. 50 it radius)				
1 2					
•					Hudronbutio Vegetation Present D. Veg. D. No.
					Hydrophytic Vegetation Present □ Yes □ No
4 5					
5	Total Cover =				
Domarks:	Total Cover =	0			
Remarks:					

Additional Remarks:			



Project/Site:	Reacon Sta	ation Project					Stantec Project #:	193710350		Date:	05/02/23
Applicant:		Transmission Comp	any Inc				Starited Froject #.	1937 10330		County:	Franklin
Investigator #1:			arry irro.	Invest	tigator #2:	Malea C	asev			State:	Ohio
Soil Unit:		ban land complex, gently	rolling		ga.co. //21		IWI/WWI Classification	n: N/A		4	Wetland 7
Landform:	Terrace	, 9,	9	Loc	cal Relief:					Sample Point:	
Slope (%):	0	Latitude:	40.016906	L	ongitude:	-83.12120	09	Datum:	WGS84	Community ID:	
Are climatic/hyd	drologic cond	litions on the site typ	oical for this	time of	year? (If no	, explain in r	emarks)	☑ Yes □	No	Section:	
		or Hydrology   sigr					Are normal circumsta	ances present?	)	Township:	
		or Hydrology 🗆 natu	urally proble	matic?			Yes	N□		Range:	Dir:
SUMMARY OF											
Hydrophytic Ve	0				s 🗆 No			Hydric Soils			
Wetland Hydrol	logy Present	?		Yes	s 🗆 No			Is This Samp	oling Point \	Within A Wetla	and? <b>□ Yes ■ No</b>
Remarks:											
LIVEROL COV											
HYDROLOGY						,					
•		ators (Check here if	indicators a	are not p	resent	) <u>`</u>					
<u>Primary</u> □	<u>":</u>	Water			B9 - Wate	ar Stained	93//95		Secondary:	B6 - Surface So	oil Cracks
	A1 - Surface A2 - High Wa				B13 - Aqu					B10 - Drainage	
	A3 - Saturation				B14 - True					C2 - Dry-Seaso	
	B1 - Water M				C1 - Hydr	ogen Sulfi	de Odor			C8 - Crayfish B	
	B2 - Sedimer			2			spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift Dep						duced Iron				Stressed Plants
	B4 - Algal Ma B5 - Iron Der				C6 - Rece		duction in Tilled Soils		☑	D2 - Geomorph D5 - FAC-Neutr	
		on Visible on Aerial Ima	gerv		D9 - Gaug					D3 - 1 AC-Neuti	ai rest
		Vegetated Concave S			Other (Ex						
Field Observat	tions:										
Surface Water	Present?	□ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Dr		Yes □ No
Water Table Pr	esent?	□ Yes ☑ No	Depth:		(in.)			Wetland Hyd	urology Pr	esentr 🗹	res 🗆 No
Saturation Pres	sent?	□ Yes ☑ No	Depth:		(in.)						
Describe Record	ded Data (str	oom gougo monitorin	a well perio	Inhotoo	nraviana i		a) if available.		N/A		
		earii qauqe, monitorii	iy well, aella	ii priotos,	, previous i	nspection	s), ii avallable:		IN/A		
Remarks:	-	eam gauge, monitorii	ig well, aeria	ii priotos,	, previous i	nspection	s), ii avaliable:		N/A		
Remarks:	·	eam gauge, monton	ig well, aeria	ii priotos,	, previous i	nspection	s), ii avallable.		N/A		
Remarks:	·	eam gauge, monitoni	ig well, aella	ii priotos,	, previous i	nspection	s), ii avallable.		N/A		
	÷:	Udorthents-Urban l		•	•	nspection	s), ii avallable.		N/A		
SOILS Map Unit Name		Udorthents-Urban I	and comple	x, gently	rolling	·	S), II available.			ı, M=Matrix)	
SOILS Map Unit Name		Udorthents-Urban I	and comple	x, gently	rolling	·	Depletion, RM=Reduced Matrix, CS=Covered			i, M=Matrix)	Texture
SOILS Map Unit Name Profile Descrip	otion (Describe to	Udorthents-Urban I	and comple	x, gently esence of indica Matrix	rolling	·	Depletion, RM=Reduced Matrix, CS=Covered	d/Coated Sand Grains; Localox Features %		, M=Matrix)  Location	Texture (e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top	Bottom	Udorthents-Urban I:	and comple.	x, gently esence of indica Matrix	rolling ators.) (Type: C=C	·	Depletion, RM=Reduced Matrix, CS=Covered Red	d/Coated Sand Grains; Localox Features % 5	ation: PL=Pore Lining Type C	Location M	_
SOILS Map Unit Name Profile Descrip Top Depth	Bottom Depth	Udorthents-Urban Is the depth needed to document the indi	and comple	x, gently esence of indica Matrix Moist)	rolling (Type: C=C)	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	d/Coated Sand Grains; Localox Features %	ation: PL=Pore Lining	Location	(e.g. clay, sand, loam)
SOILS  Map Unit Name Profile Descrip  Top Depth 0	Bottom Depth 18	Udorthents-Urban Is the depth needed to document the indi	and comple icator or confirm the at Color (N 10YR	x, gently sence of indica Matrix Moist) 4/2	/ rolling stors.) (Type: C=C	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/4	d/Coated Sand Grains; Localox Features % 5	ation: PL=Pore Lining Type C	Location M	(e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth  18	Udorthents-Urban Is the depth needed to document the indi  Horizon  1	and comple cator or confirm the at Color (N 10YR	x, gently sence of indica Matrix Moist) 4/2	/ rolling alors.) (Type: C=C  %  90	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/4 4/4	d/Coated Sand Grains; Localox Features % 5	Type C C	Location M PL	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 18	Udorthents-Urban Is the depth needed to document the indi Horizon 1	and comple cator or confirm the at Color (N 10YR	x, gently seence of indica Matrix Moist) 4/2	/ rolling	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/4 4/4	d/Coated Sand Grains: Local dox Features % 5 5	Type C C	Location M PL	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0	Deption (Describe to Bottom Depth 18	Udorthents-Urban Is the depth needed to document the indi  Horizon  1	and comple cator or confirm the at Color (N 10YR	x, gently series of indica Matrix Moist) 4/2	/ rolling / rolling / stors.) (Type: C=C // 90	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/4 4/4	d/Coated Sand Grains; Localox Features % 5 5	Type C C	Location M PL	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0	Depth 18	Udorthents-Urban Is the depth needed to document the indi Horizon 1	and comple cator or confirm the at  Color (N  10YR	x, gently seence of indica Matrix Moist) 4/2	/ rolling / rolling / stors.) (Type: C=C // 90	oncentration, D=  10YR 5YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/4  4/4	d/Coated Sand Grains; Locator Sand Grains; Locator Features % 5 5	Type C C	Location M PL	(e.g. clay, sand, loam)  clay loam  clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0	Depth 18	Udorthents-Urban II: the depth needed to document the indi  Horizon  1	and comple cator or confirm the at  Color (N 10YR	x, gently sence of indica Matrix Moist) 4/2	/ rolling // stors.) (Type: C=C	5YR	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/4 4/4	dd/Coated Sand Grains; Localox Features % 5	Type C C	Location M PL	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 18 Soil Field In	Udorthents-Urban Is the depth needed to document the indi Horizon 1	and comple cator or confirm the at  Color (N 10YR	x, gently sence of indica Matrix Moist)  4/2	/ rolling / rolling // stors.) (Type: C=C // 90 //	10YR 5YR t ):	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/4 4/4	d/Coated Sand Grains; Localox Features % 5	Type C C s for Problem	Location  M PL natic Soils 1	(e.g. clay, sand, loam)  clay loam  clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Dotton (Describe to Bottom Depth 18 Soil Field In A1- Histosol	Udorthents-Urban Is the depth needed to document the indi Horizon  1	and comple cator or confirm the at  Color (N 10YR	x, gently sence of indica Matrix Moist)  4/2	y rolling  y rolling  %  90      soft presen  S4 - Sand	10YR 5YR t ):  gleyed I	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/4 4/4	d/Coated Sand Grains; Local dox Features % 5 5 Indicators	Type C C	Location  M PL	(e.g. clay, sand, loam)  clay loam  clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 18 Soil Field In	Udorthents-Urban II the depth needed to document the indi Horizon  1	and comple cator or confirm the at  Color (N 10YR	x, gently sence of indica Matrix Moist)  4/2	/ rolling / rolling // stors.) (Type: C=C // 90 //	10YR 5YR t ):j	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/4 4/4	d/Coated Sand Grains; Local dox Features % 5 5 Indicators	Type C C	Location  M PL	(e.g. clay, sand, loam) clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Dotton (Describe to Depth 18	Udorthents-Urban II the depth needed to document the indi  Horizon  1 dicators (check he objeedon stic	and comple cator or confirm the at  Color (N 10YR	x, gently seence of indica Matrix Moist) 4/2	/ rolling thors.) (Type: C=C  % 90	10YR 5YR t )□ (I) (Gleyed I) (I) (Sleyed II) (I) (I) (I) (I) (I) (I) (I) (I) (I)	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/4 4/4 Matrix	d/Coated Sand Grains; Local dox Features % 5 5 Indicators	Type C C	Location  M PL	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Depth  Bottom Depth  18  Soil Field In  A1- Histosol A2 - Histic Eq. A3 - Black Hi A4 - Hydroge A5 - Stratifier	Udorthents-Urban II the depth needed to document the indi  Horizon  1	and comple cator or confirm the at  Color (N 10YR	x, gently sence of indica Matrix Moist)  4/2	/ rolling  / rolling  // stors.) (Type: C=C)  // 90	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/4  4/4     Matrix  Ineral Matrix	dd/Coated Sand Grains; Localox Features % 5 5 Indicators	Type C C for Problen A16 - Coast F12 - Iron-M TF12 - Very	Location  M PL	(e.g. clay, sand, loam) clay loam clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Depth  Bottom Depth  18  Soil Field In  A1- Histosol A2 - Histic E  A3 - Black Hi A4 - Hydroge A5 - Stratifled A10 - 2 cm M	Udorthents-Urban Is the depth needed to document the indi Horizon  1	and comple cator or confirm the at  Color (N  10YR	x, gently seence of indica Matrix Moist)  4/2	y rolling % 90 sot presen \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F3 - Deple	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) 5/4 4/4 Matrix  neral Matrix  Red Red Color (Moist) 5/4 4/4	dd/Coated Sand Grains; Localox Features % 5 5 Indicators	Type C C for Problen A16 - Coast F12 - Iron-M TF12 - Very	Location  M PL	(e.g. clay, sand, loam) clay loam clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Dotton (Describe to Depth 18 18 19 -	Udorthents-Urban II the depth needed to document the indi Horizon  1	and comple cator or confirm the at  Color (N  10YR	x, gently seence of indica Matrix Moist)  4/2	/ rolling  whors.) (Type: C=C  %  90	oncentration. D=  10YR 5YR t ):  Iy Gleyed I ly Redox ped Matrix y Muck Mry Gleyed deted Matrix by Gleyed Eded Matrix by Company	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/4  4/4      Matrix  Ineral Matrix  Inface	dd/Coated Sand Grains; Localox Features % 5 5 Indicators	Type C C for Problen A16 - Coast F12 - Iron-M TF12 - Very	Location  M PL	(e.g. clay, sand, loam) clay loam clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Dotton (Describe to Depth 18	Udorthents-Urban latte depth needed to document the indite the the indi	and comple cator or confirm the at  Color (N  10YR	x, gently seence of indica Matrix Moist)  4/2	/ rolling  // rolling  // stors.) (Type: C=C  // 90	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/4  4/4     Matrix  neral Matrix  fface Surface	dd/Coated Sand Grains; Localox Features % 5 5 Indicators	Type C C for Problen A16 - Coast F12 - Iron-M TF12 - Very	Location  M PL	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Dotton (Describe to Depth 18 18 1- 15 15 15 15 15 15 15 15 15 15 15 15 15	Udorthents-Urban latte depth needed to document the indite the the indi	and comple cator or confirm the at  Color (N  10YR	x, gently esence of indicate Matrix Moist)  4/2	/ rolling  whors.) (Type: C=C  %  90	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/4  4/4     Matrix  neral Matrix  fface Surface	dd/Coated Sand Grains; Localox Features % 5 5 Indicators	Type C C for Problen S7 - Dark Si F12 - Iron-M TF12 - Very Other (Explain	Location  M PL	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Dotton (Describe to Depth 18 18 19 -	Udorthents-Urban II the depth needed to document the indi  Horizon  1 dicators (check he poipedon stic en Sulfide d Layers fluck ed Below Dark Surface park Surface fluck Mineral	and comple cator or confirm the at  Color (N  10YR	x, gently seence of indica Matrix Moist)  4/2	/ rolling  // rolling  // stors.) (Type: C=C  // 90	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/4  4/4     Matrix  neral Matrix  fface Surface	d/Coated Sand Grains; Localox Features % 5 5 Indicators  Indicators of hydroph	Type C C	Location  M PL natic Soils ¹ Prairie Redox urface langanese Mass Shallow Dark St ain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam es urface
SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Dotton (Describe to Depth 18 18 1- 15 15 15 15 15 15 15 15 15 15 15 15 15	Udorthents-Urban II the depth needed to document the indi  Horizon  1 dicators (check he poipedon stic en Sulfide d Layers fluck ed Below Dark Surface park Surface fluck Mineral	and comple cator or confirm the at  Color (N  10YR	x, gently esence of indicate Matrix Moist)  4/2	/ rolling  // rolling  // stors.) (Type: C=C  // 90	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/4  4/4     Matrix  neral Matrix  fface Surface	dd/Coated Sand Grains; Localox Features % 5 5 Indicators	Type C C	Location  M PL natic Soils ¹ Prairie Redox urface langanese Mass Shallow Dark St ain in Remarks)	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Dotton (Describe to Depth 18 18 19 -	Udorthents-Urban II the depth needed to document the indi  Horizon  1 dicators (check he poipedon stic en Sulfide d Layers fluck ed Below Dark Surface park Surface fluck Mineral	and comple cator or confirm the at  Color (N  10YR	x, gently seence of indica Matrix Moist)  4/2	/ rolling  // rolling  // stors.) (Type: C=C  // 90	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/4  4/4     Matrix  neral Matrix  fface Surface	d/Coated Sand Grains; Localox Features % 5 5 Indicators  Indicators of hydroph	Type C C	Location  M PL natic Soils ¹ Prairie Redox urface langanese Mass Shallow Dark St ain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam es urface
SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Dotton (Describe to Depth 18 18 19 -	Udorthents-Urban II the depth needed to document the indi  Horizon  1 dicators (check he poipedon stic en Sulfide d Layers fluck ed Below Dark Surface park Surface fluck Mineral	and comple cator or confirm the at  Color (N  10YR	x, gently seence of indica Matrix Moist)  4/2	/ rolling  // rolling  // stors.) (Type: C=C  // 90	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)  5/4  4/4     Matrix  neral Matrix  fface Surface	d/Coated Sand Grains; Localox Features % 5 5 Indicators  Indicators of hydroph	Type C C	Location  M PL natic Soils ¹ Prairie Redox urface langanese Mass Shallow Dark St ain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam es urface



Project/Site: Beacon Station Project Wetland 7 Sample Point: SP13

VEGETATION (Species identified in all uppercase are non-native species.)

VEGETATION	(Species identified in all uppercase are non-native	species.)			
Tree Stratum (Plo	ot size: 30 ft radius)				
	<u>Species Name</u>	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.	-				Total Number of Dominant Species Across All Strata:(B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7.	-				
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 0 x 1 = 0
	Total Cover =	0			FACW spp. 92 x 2 = 184
					FAC spp. 0 x 3 = 0
. 0	atum (Plot size: 15 ft radius)	45		E4 0)4/	FACU spp. 0 x 4 = 0
1.	Salix interior	15	Y	FACW	UPL spp. $0   x   5 = 0$
2.	Frangula alnus	2	N	FACW	<b>-</b>
3.					Total 92 (A) 184 (B)
4.					Describeres ladou - D/A - 2000
5. 6.					Prevalence Index = B/A = 2.000
7.	<del></del>				
8.					Hydrophytic Vegetation Indicators:
9.					✓ Yes □ No Rapid Test for Hydrophytic Vegetation
10.					☑ Yes □ No Dominance Test is > 50%
10.	Total Cover =				✓ Yes □ No Prevalence Index is ≤ 3.0 *
	Total Gover =				☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	t aizo: E ft radius)				□ Yes □ No Problem Hydrophytic Vegetation (Explain) *
1.	Phalaris arundinacea	75	Y	FACW	Tes into Problem Hydrophytic Vegetation (Explain)
2.					* Indicators of hydric soil and wetland hydrology must be
3.					present, unless disturbed or problematic.
4.					Definitions of Vegetation Strata:
5.					Dominiono di Vogotation di ata
6	<u> </u>				Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.					height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
-	Total Cover =	75			•
	. 5 56761	. •			
Woody Vine Stratu	um (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☑ Yes ☐ No
4.					, ,
5.	-				
	Total Cover =	0			
Remarks:					
Additional Ren	marks:				

Additional Remarks:			



Project/Site:		ation Project	_				Stantec Project #:	193710350		Date:	05/02/23
Applicant:		Transmission Comp	any Inc.	1		Malaa				County:	Franklin
Investigator #1: Soil Unit:		er ban land complex, gently		Invest	igator #2:		NWI/WWI Classification	. NI/A		State: Wetland ID:	Ohio N/A
Landform:	Terrace	ban land complex, gently	rolling	Loc	al Relief:		NVVI/VV VVI Glassification	. IN/A		Sample Point:	·
Slope (%):	0	Latitude:	40.016845		ongitude:		00	Datum:	WGS84	Community ID:	
		ditions on the site typ						☑ Yes □	No	Section:	
		or Hydrology □ sign			ycai: (ii iio	, explail iii	Are normal circumsta			Township:	
		or Hydrology □ sigi or Hydrology □ natι					✓ Yes	N⊎		Range:	Dir:
SUMMARY OF		or riyarology = riak	arany probio	mano:			- 165	110		rtange.	DII.
Hydrophytic Ve		sent?		□ Yes	☑ No			Hydric Soils	Present?		□ Yes ☑ No
Wetland Hydrol	0				□ No					Within A Wetla	and? ■ Yes ■ No
Remarks:	ogy i resem	•		- 100	_ 110			13 THIS Carrie	oning i onic	Wild III 7 C We die	ana: - 165 - 110
rtomanto.											
HYDROLOGY											
		4 (0) 11 :				`					
•		ators (Check here if	indicators a	are not p	resent	)⊡					
<u>Primary</u> □	: A1 - Surface	Water			B9 - Wate	r Stainad	Logyon		Secondary:	B6 - Surface So	sil Crooks
	A1 - Surface A2 - High Wa				B13 - Aqu					B10 - Drainage	-
	A3 - Saturati				B14 - True					C2 - Dry-Seaso	
	B1 - Water M			_	C1 - Hydro				_	C8 - Crayfish B	
	B2 - Sedimer	nt Deposits					spheres on Living Roots			C9 - Saturation	Visible on Aerial Imagery
	B3 - Drift De	posits			C4 - Prese	ence of Re	educed Iron			D1 - Stunted or	Stressed Plants
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorph	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutr	al Test
		on Visible on Aerial Ima			D9 - Gaug Other (Ex						
	Do - Sparser	y Vegetated Concave S	urrace		Other (Exp	piairi iri Ke	enarks)				
Field Observed											
Field Observat											
Surface Water		□ Yes ☑ No	Depth:		(in.)			Wetland Hy	droloav Pr	esent?	Yes ☑ No
Water Table Pr		□ Yes ☑ No	Depth:		(in.)						
Saturation Pres	ent?	□ Yes ☑ No	Depth:		(in.)						
Describe Record	led Data (str	., .									
		eam gauge, monitorir	ıg well, aerla	i pnotos,	previous i	nspection	ns), if available:		N/A		
Remarks:	ou Data (ot.	eam gauge, monitorir	ig weii, aeria	i pnotos,	previous i	nspectio	ns), if available:		N/A		
Remarks:	(01	eam gauge, monitorir	ig weil, aeria	i pnotos,	previous i	nspection	ns), if available:		N/A		
Remarks:	Zata (eti	eam gauge, monitorir	ig well, aeria	i pnotos,	previous i	nspectio	ns), if available:		N/A		
SOILS	·				•	nspection	ns), if available:		N/A		
SOILS Map Unit Name	):	Udorthents-Urban I	and comple	x, gently	rolling	·	,	//Coated Sand Grains; Loca		, M=Matrix)	
SOILS Map Unit Name Profile Descrip	etion (Describe to	Udorthents-Urban I	and comple	x, gently	rolling	·	Depletion, RM=Reduced Matrix, CS=Covered			, M=Matrix)	Texture
SOILS Map Unit Name Profile Descrip Top	e:  tion (Describe to  Bottom	Udorthents-Urban I: the depth needed to document the indi	and comple.	x, gently sence of indicat Matrix	rolling tors.) (Type: C=Co	·	Depletion, RM=Reduced Matrix, CS=Covered Red	ox Features	ation: PL=Pore Lining	1	Texture (e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top Depth	etion (Describe to  Bottom  Depth	Udorthents-Urban I	and comple	x, gently esence of indical Matrix Moist)	rolling lors.) (Type: C=Cd	·	Depletion, RM=Reduced Matrix, CS=Covered			, M=Matrix)  Location	(e.g. clay, sand, loam)
SOILS Map Unit Name Profile Descrip Top	e:  tion (Describe to  Bottom	Udorthents-Urban Is the depth needed to document the indi	and comple.	x, gently sence of indicat Matrix	rolling tors.) (Type: C=Co	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features %	ation: PL=Pore Lining	Location	
SOILS  Map Unit Name Profile Descrip  Top Depth 0	Bottom Depth 18	Udorthents-Urban Is the depth needed to document the indi  Horizon  1	and comple: cator or confirm the ab Color (N 10YR	x, gently sence of indicat Matrix Moist) 3/1	rolling lors.) (Type: C=Cd  % 100	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red-Color (Moist)	ox Features %  	ation: PL=Pore Lining Type	Location 	(e.g. clay, sand, loam)  clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth 0	Bottom Depth 18	Udorthents-Urban Is the depth needed to document the indi  Horizon  1	and complecator or confirm the ab	x, gently sence of indicat Matrix Moist) 3/1	rolling tors.) (Type: C=Ce  % 100	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features %  	Type	Location  	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0	btion (Describe to  Bottom Depth 18	Udorthents-Urban Is the depth needed to document the indi  Horizon  1	and complecator or confirm the ab	x, gently sence of Indicat Matrix Moist) 3/1	rolling lors.) (Type: C=Cd  % 100	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features	ation: PL=Pore Lining Type	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0	btion (Describe to  Bottom Depth 18	Udorthents-Urban Is the depth needed to document the indi  Horizon  1	cator or confirm the at	x, gently seence of indicat Matrix Moist) 3/1	rolling lors.) (Type: C=Cd % 100	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features	ation: PL=Pore Lining Type	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 18	Udorthents-Urban Is the depth needed to document the indi  Horizon  1	cand complecator or confirm the attended to the confirmation of the confirmation o	x, gently seence of indicat Matrix Moist) 3/1	rolling fors.) (Type: C=Cc  % 100	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Color (Moist)	ox Features	ation: PL=Pore Lining Type	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0	Estion (Describe to  Bottom Depth 18	Udorthents-Urban Is the depth needed to document the indi  Horizon  1	cand complecator or confirm the at Color (N 10YR	x, gently seence of indicat Matrix Moist) 3/1	rolling fors.) (Type: C=Cc  % 100	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Color (Moist)	ox Features	ation: PL=Pore Lining Type		(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth 18	Udorthents-Urban II: the depth needed to document the indi  Horizon  1	cand comple cator or confirm the at	x, gently sence of Indical Matrix Moist)  3/1	rolling ors.) (Type C=Cc  % 100	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Color (Moist)	ox Features	ation: PL=Pore Lining  Type	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 18 Soil Field Ir	Udorthents-Urban Is the depth needed to document the indi  Horizon  1	cand comple cator or confirm the at	x, gently sence of Indicat Matrix Moist) 3/1	rolling ors.) (Type: C=Cc  % 100 ot present	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Reduced Color (Moist)	ox Features % Indicators	Type s for Problem	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 18 Soil Field Ir	Udorthents-Urban Is the depth needed to document the indi  Horizon  1	cand comple cator or confirm the at	x, gently seence of Indical Matrix Moist)  3/1	rolling tors.) (Type: C=CC  % 100 tor present	oncentration, D-	Depletion, RM=Reduced Matrix, CS=Covered Reduced Color (Moist)	ox Features % Indicators	Type	Location	(e.g. clay, sand, loam) clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic E	Udorthents-Urban II the depth needed to document the indi Horizon  1	cand comple cator or confirm the at	x, gently seence of indicat Matrix Moist)  3/1	rolling loss.) (Type: C-Cc % 100 ot present S4 - Sand S5 - Sand	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist)	ox Features % Indicators	Type	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H	Udorthents-Urban Is the depth needed to document the indi  Horizon  1 ndicators (check he pipedon istic	cand comple cator or confirm the at	x, gently seence of Indical Matrix Moist)  3/1	rolling   %	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Red	ox Features %	Type	Location	(e.g. clay, sand, loam) clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic E	Udorthents-Urban II the depth needed to document the indi  Horizon  1	cand comple cator or confirm the at	x, gently seence of indicat Matrix Moist)  3/1	rolling loss.) (Type: C-Cc % 100 ot present S4 - Sand S5 - Sand	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Red Color (Moist) Matrix	ox Features %	Type s for Problen A16 - Coark St F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black H A4 - Hydroge	Udorthents-Urban II the depth needed to document the indi  Horizon  1	cand comple cator or confirm the at	x, gently seence of Indicat Matrix Moist)  3/1	rolling  % 100 ot present S4 - Sand S6 - Strip; F1 - Loam	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Rediction (Moist)	ox Features %	Type s for Problen A16 - Coark St F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth  18 Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A10 - 2 cm N A11 - Deplete	Udorthents-Urban II the depth needed to document the indi  Horizon  1 ndicators (check he pipedon istic en Sulfide d Layers luck ed Below Dark Surface	cand comple cator or confirm the at	x, gently sence of Indical Matrix Moist)  3/1	rolling  % 100 ot present \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F3 - Deple	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Reduced Color (Moist)  Watrix ineral Matrix crface	ox Features %	Type s for Problen A16 - Coark St F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth  18  Soil Field Ir Soil Field Ir Soil Field Ir	Udorthents-Urban latte depth needed to document the indi  Horizon  1 ndicators (check he pipedon istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface	cand comple cator or confirm the at	x, gently seence of Indicat Matrix Moist)  3/1	rolling  % 100 ot present S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Red	ox Features %	Type s for Problen A16 - Coark St F12 - Iron-M TF12 - Very	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy N	Udorthents-Urban II the depth needed to document the indi  Horizon  1	cand comple cator or confirm the at	x, gently seence of indicat Matrix Moist)  3/1       Drs are n	rolling  % 100 ot present \$4 - Sand \$5 - Sand \$6 - Stripp F1 - Loam F3 - Deple	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Red	ox Features %	Type s for Problen A16 - Coast S12 - Iron-M TF12 - Very Other (Explain	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth O NRCS Hydric	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy N	Udorthents-Urban latte depth needed to document the indi  Horizon  1 ndicators (check he pipedon istic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface	cand comple cator or confirm the at	x, gently seence of Indicat Matrix Moist)  3/1	rolling  % 100 ot present S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Red	ox Features %	Type s for Problen A16 - Coast S12 - Iron-M TF12 - Very Other (Explain	Location	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E  A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy N	Udorthents-Urban II the depth needed to document the indi  Horizon  1	cand comple cator or confirm the at	x, gently seence of Indicat Matrix Moist)  3/1	rolling  % 100 ot present S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Red	ox Features %	Type	Location	(e.g. clay, sand, loam) clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifiee A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mi	Udorthents-Urban II the depth needed to document the indi  Horizon  1	cand comple cator or confirm the at	x, gently serice of Indical Matrix Moist)  3/1	rolling  % 100 ot present S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Red	ox Features % Indicators  Indicators of hydroph	Type	Location	(e.g. clay, sand, loam)  clay loam
SOILS Map Unit Name Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifiee A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mi	Udorthents-Urban II the depth needed to document the indi  Horizon  1	cand comple cator or confirm the at	x, gently serice of Indical Matrix Moist)  3/1	rolling  % 100 ot present S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Red	ox Features % Indicators  Indicators of hydroph	Type	Location	(e.g. clay, sand, loam)  clay loam
SOILS  Map Unit Name Profile Descrip  Top Depth  0 NRCS Hydric	Bottom Depth  18  Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifiee A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mi	Udorthents-Urban II the depth needed to document the indi  Horizon  1	cand comple cator or confirm the at	x, gently serice of Indical Matrix Moist)  3/1	rolling  % 100 ot present S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	oncentration, D=	Depletion, RM=Reduced Matrix, CS=Covered Redical Red	ox Features % Indicators  Indicators of hydroph	Type	Location	(e.g. clay, sand, loam)  clay loam



Project/Site: Wetland ID: N/A Sample Point: SP14 Beacon Station Project **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) **Dominance Test Worksheet** Species Name % Cover Dominant Ind.Status Gleditsia triacanthos **FACU** 2. Number of Dominant Species that are OBL, FACW, or FAC: \_\_\_\_\_(A) 3. --\_\_ \_\_ 4. Total Number of Dominant Species Across All Strata: 5 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B) 7 8. Prevalence Index Worksheet 9 \_\_ Total % Cover of: Multiply by: 10. OBL spp. x 1 = Total Cover = x 2 = FACW spp. 35 70 x 3 = FAC spp. 18 FACU spp. x 4 = Sapling/Shrub Stratum (Plot size: 15 ft radius) 24 96 Rubus allegheniensis **FACU** UPL spp. x 5 = 2. Cornus racemosa 2 Ν FAC 3. Total 70 209 4. 5. Prevalence Index = B/A = 2.986 6. 8. **Hydrophytic Vegetation Indicators:** 9 ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation 10. Yes Dominance Test is > 50% Total Cover = □ No Prevalence Index is ≤ 3.0 \* v Yes ✓ No Yes Morphological Adaptations (Explain) \* Herb Stratum (Plot size: 5 ft radius) ☑ No Problem Hydrophytic Vegetation (Explain) \* Yes 2 FACU Ν Asclepias syriaca \* Indicators of hydric soil and wetland hydrology must be 3 **FACU** Galium aparine Ν present, unless disturbed or problematic. Dipsacus fullonum **FACU** 3. 4. Lonicera maackii 5 UPL **Definitions of Vegetation Strata:** FAC 5. Alliaria petiolata 4 Ν Υ 6 Phalaris arundinacea 35 **FACW** Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. 7. 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9. ft. tall.

10. 11. Herb - All herbaceous (non-woody) plants, regardless of size, 12 ------\_\_ and woody plants less than 3.28 ft. tall. 13. 14 15. Woody Vines - All woody vines greater than 3.28 ft. in height. Total Cover = 56 Woody Vine Stratum (Plot size: 30 ft radius) 1. 2 3. Hydrophytic Vegetation Present □ Yes ☑ No 4 5. Total Cover = 0 Remarks:

Additional Rem	narks:			

#### BEACON STATION PROJECT ECOLOGICAL SURVEY REPORT

Data Forms May 12, 2023

#### C.2 ORAM DATA FORMS

Charlie Allen 07/13/2022

### **Background Information**

Name: Charlie Allen

Date: 07/13/2022

Affiliation:

Stantec

Address:

1500 Lake Shore Drive, Suite 100, Columbus, OH 43204

Phone Number:

614-286-4616

e-mail address:

charlie.allen@stantec.com

Name of Wetland: Wetland 1

Vegetation Communit(ies):

PEM

HGM Class(es):

Depression

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



Lat/Long or UTM Coordinate 40.01298, -83.1240	
USGS Quad Name Northwest Columbus	
County Franklin	
Township Porter	
Section and Subsection N/A	
Hydrologic Unit Code 050901030205	
Site Visit 07/13/2022	
National Wetland Inventory Map No	
Ohio Wetland Inventory Map No	
Soil Survey Franklin County Soil Survey	
Delineation report/map Wetland and Waterbody Delineation Report	

Name of Wetland: Wetland 1 Wetland Size (acres, hectares): 0.015 acre with in Project area, 0.025 total. Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. Field Forest Wetlan Field Forest Forest Comments, Narrative Discussion, Justification of Category Changes: Final score: 13 Category: 1

#### **Scoring Boundary Worksheet**

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

Charlie Allen Roberts-Hayden Line Extension Project 07/13/2022 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. Identify the locations where there is physical evidence that hydrology Step 2 changes rapidly. Such evidence includes both natural and humaninduced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland. Step 3 Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary. 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. Step 5 In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately. 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.

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.

Roberts-Hayden Line Extension Project Charlie Allen 07/13/2022

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status  Go to Question 2	NO So to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland.  Go to Question 3	NO So to Question 3
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO So 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	NO So to Question 7
7	<b>Fens.</b> 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	NO Solution 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 spags and downed logs?	Wetland is a Category 3 wetland.  Go to Question 8b	NO So to Question 8b

	Charlie Allen		07/13/2022
8b	Mature forested wetlands. Is the wetland a forested wetland with	YES	NO X
	50% or more of the cover of upper forest canopy consisting of		
	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.	
		Category 5 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 NO
	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	Go to Question 90
	iditawara ances of other flyarological controls:	Category 3 status	
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 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 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
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES YES	NO T
••	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 YES	NO I
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		X
	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	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	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
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
	Montgomery, Van Wert etc.).	Complete Quantitative	
	monigomory, van vvoit olo.j.	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: W	/etland <sup>·</sup>		Rater(s):Charlie Allen	Г	Date: 07/13/2022
0	0	Metric 1. Wetland A	rea (size).		
max 6 pts.	subtotal	Select one size class and assign score   >50 acres (>20.2ha) (6 pts)   25 to <50 acres (10.1 to <2 to <25 acres (4 to <10.1 to <25 acres (1.2 to <4ha to <10.3 to <3 acres (0.12 to <1.0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts)	0.2ha) (5 pts) ha) (4 pts) ) (3 pts) 2ha) (2pts)		
1	1	Metric 2. Upland bu	ffers and surrounding	ı land use.	
max 14 pts.	subtotal	WIDE. Buffers average 500 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. 2nd growth of LOW. Old field (>10 years) MODERATELY HIGH. Res	Select only one and assign score. Do not meet (164ft) or more around wetland perime 25m to <50m (82 to <164ft) around wetlare 10m to <25m (32ft to <82ft) around wetlare 10m (<32ft) around wetland per Select one or double check and average older forest, prairie, savannah, wildlife at shrub land, young second growth forest sidential, fenced pasture, park, conservation pasture, row cropping, mining, constitution of the more selections.	eter (7) and perimeter (4) atland perimeter (1) rimeter (0) ge. area, etc. (7) t. (5) tion tillage, new fallow	field. (3)
7	8	Metric 3. Hydrology			
max 30 pts.	subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3)  Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (lal 3c. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)  1. Modifications to natural hydrologic	ce water (3)  ke or stream) (5)  3d. Dura	Part of wetland/upla Part of riparian or u ation inundation/satura Semi- to permanent Regularly inundated Seasonally inundated Seasonally saturate	(1)  ke and other human use (1) and (e.g. forest), complex (1) pland corridor (1) ation. Score one or dbl check tly inundated/saturated (4) d/saturated (3)
		None or none apparent (12 Recovered (7)  Recovering (3)  Recent or no recovery (1)	Check all disturbances observed  ditch tile dike weir stormwater input	point source (nonstead filling/grading road bed/RR track dredging other	ormwater)
6	14	Metric 4. Habitat Al	teration and Developr	nent.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)  4b. Habitat development. Select only Excellent (7) Very good (6) Good (5)			
su	14	Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or of the second of the s	double check and average.  Check all disturbances observed mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling remove herbaceous/aquatice sedimentation dredging farming nutrient enrichment	c bed removal
last revised	l 1 Februa	y 2001 jjm			

Site: Wetlar	nd 1	Rater(s): Charlie	Allen	Date: 07/13/2022
14 subtotal fir	Metric 5. Special Wo	etlands.		
max 10 pts. subto	Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary w Lake Erie coastal/tributary w Lake Plain Sand Prairies (0) Relict Wet Prairies (10) Known occurrence state/fed Significant migratory songbi Category 1 Wetland. See C	vetland-unrestricted hydro vetland-restricted hydro ak Openings) (10) eral threatened or enda rd/water fowl habitat or question 1 Qualitative R	angered species (10) usage (10) lating (-10)	
-1 13	Metric 6. Plant com	•	•	opograpny.
max 20 pts. subto	our resumme regeraner communica		Community Cover Scale	
	Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2	
	Aquatic bed	1	Present and either comprises sm	•
	1 Emergent Shrub		vegetation and is of moderate	
	Forest	2	significant part but is of low qua Present and either comprises sig	-
	Mudflats	2	vegetation and is of moderate	
			=	quality of comprises a small
	Open water		part and is of high quality	
	Other	_ 3	Present and comprises significar	•
	6b. horizontal (plan view) Interspersio	n	vegetation and is of high qualit	у
	Select only one.	Nametica D	and the second s	
	High (5)		escription of Vegetation Quality	· · · · · · · · · · · · · · · · · · ·
	Moderately high(4)	low	Low spp diversity and/or predom	
	Moderate (3)		disturbance tolerant native spe	
	Moderately low (2)	mod	Native spp are dominant compor	_
	✓ Low (1)		although nonnative and/or distu	
	None (0)		can also be present, and speci	•
	6c. Coverage of invasive plants. Refe		moderately high, but generally	
	to Table 1 ORAM long form for list. Ac		threatened or endangered spp	
	or deduct points for coverage	high	A predominance of native specie	
	Extensive >75% cover (-5)		and/or disturbance tolerant nat	
	Moderate 25-75% cover (-3)	)	absent, and high spp diversity	•
	Sparse 5-25% cover (-1)		the presence of rare, threatene	ed, or endangered spp
	Nearly absent <5% cover (0			
	Absent (1)		d Open Water Class Quality	
	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 a	
	0 Vegetated hummucks/tussu		Moderate 1 to <4ha (2.47 to 9.8	8 acres)
	2 Coarse woody debris >15cn		High 4ha (9.88 acres) or more	
	0 Standing dead >25cm (10in			
	0 Amphibian breeding pools		raphy Cover Scale	
		0	Absent	
		1	Present very small amounts or if	more common
			of marginal quality	
		2	Present in moderate amounts, bu	_
			quality or in small amounts of h	
		3	Present in moderate or greater a	mounts
			and of highest quality	
13				

End of Quantitative Rating. Complete Categorization Worksheets.

### **ORAM Summary Worksheet**

Wetland 1 Charlie Allen 07/13/2022

		circle answer or insert	Result
Narrative Rating	Question 1 Critical Habitat	score NO	If yes, Category 3.
·	Question 2. Threatened or Endangered	NO	If yes, Category 3.
	Species  Question 3. High Quality Natural Wetland	NO	If yes, Category 3.
	Question 4. Significant bird habitat	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	NO	If yes, Category 1.
	Question 6. Bogs	NO	If yes, Category 3.
	Question 7. Fens	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	NO	If yes, Category 3
	Question 11. Relict Wet Prairies	NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
J	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	6	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE	13	Category based on score breakpoints Category 1

**Complete Wetland Categorization Worksheet.** 

### **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> 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 X	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 X	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?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO X	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 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	
Category 1				

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

Charlie Allen 07/13/2022

### **Background Information**

Name: Charlie Allen

Date: 07/13/2022

Affiliation:

Stantec

Address:

1500 Lake Shore Drive, Suite 100, Columbus, OH 43204

Phone Number:

614-286-4616

e-mail address:

charlie.allen@stantec.com

Name of Wetland: Wetland 2

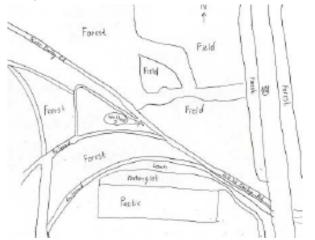
Vegetation Communit(ies):

PEM

HGM Class(es):

Depression

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



Lat/Long or UTM Coordinate 40.01284, -83.1238	
USGS Quad Name Northwest Columbus	
County Franklin	
Township Porter	
Section and Subsection N/A	
Hydrologic Unit Code 050901030205	
Site Visit 07/13/2022	
National Wetland Inventory Map No	
Ohio Wetland Inventory Map No	
Soil Survey Franklin County Soil Survey	
Delineation report/map Wetland and Waterbody Delineation Report	

Netland Size (acres, hectares): 0.007		
Sketch: Include north arrow, relationship with other surface waters, ve	getation zones, etc.	
	V	1
	E	1
	Field	1
		1
1 /		
1// ///		
The Forest		
12/ ///		
Sele Park	,	
1/2/1/8/	Field	
1 1 1 18	1 10	N
1 1 781		1
L I WAY OF	1 /	
Forest	Wetland	
	Wetlan	
	5,0/	
Reilead	111	
	-111	
	11/	
Forest	11.	/
, crest		/
Comments, Narrative Discussion, Justification of Category Changes:		

#### **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.

Charlie Allen Roberts-Hayden Line Extension Project 07/13/2022 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. Identify the locations where there is physical evidence that hydrology Step 2 changes rapidly. Such evidence includes both natural and humaninduced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland. Step 3 Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary. 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. Step 5 In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately. 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.

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.

Roberts-Hayden Line Extension Project Charlie Allen 07/13/2022

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status  Go to Question 2	NO So to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland.  Go to Question 3	NO So to Question 3
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO So to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO So 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	NO So to Question 7
7	<b>Fens.</b> 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	NO Solution 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 spags and downed logs?	Wetland is a Category 3 wetland.  Go to Question 8b	NO So to Question 8b

	Charlie Allen		07/13/2022
8b	Mature forested wetlands. Is the wetland a forested wetland with	YES	NO X
	50% or more of the cover of upper forest canopy consisting of		
	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.	
		Category 5 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 NO
	prevent erosion and the loss of aquatic plants, i.e. the wetland is	Matter de la period he	C- 4- Our-tien 0-
	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
	landward dikes of other hydrological controls:	Category 3 status	
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 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 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
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES VIESTION 10	NO I
36	tolerant native plant species within its vegetation communities?	123	NO
		Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Ougation 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	Go to Question 10	NO IZ
10	Lucas, Fulton, Henry, or Wood Counties and can the wetland be	1 1 2 3	INO X
	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	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	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	5	X
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Complete Quantitative	
	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: Wetland 2		· [	Rater(s):Charlie Allen		<b>Date:</b> 07/13/2022
0	0	Metric 1. Wetland Ar	ea (size).		
max 6 pts.	subtotal	Select one size class and assign score	2ha) (5 pts) a) (4 pts) (3 pts) na) (2pts)		
1	1	Metric 2. Upland buf	fers and surroundir	ng land use.	
max 14 pts.	subtotal	MEDIUM. Buffers average 2 NARROW. Buffers average VERY NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. 2nd growth or of LOW. Old field (>10 years), MODERATELY HIGH. Resident	(164ft) or more around wetland peri 5m to <50m (82 to <164ft) around w 10m to <25m (32ft to <82ft) around erage <10m (<32ft) around wetland	meter (7) retland perimeter (4) wetland perimeter (1) perimeter (0) erage. fe area, etc. (7) rest. (5) vation tillage, new fallo	ow field. (3)
7	8	Metric 3. Hydrology.			
max 30 pts.	subtotal	3a. Sources of Water. Score all that a High pH groundwater (5) Other groundwater (3)  Precipitation (1) Seasonal/Intermittent surface Perennial surface water (lake 3c. Maximum water depth. Select only >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (3) 4 <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic	e water (3) e or stream) (5) 3d. D v one and assign score.	Part of wetland/up Part of riparian or Duration inundation/sate Semi- to permane Regularly inundation Seasonally inundation	in (1) lake and other human use (1) pland (e.g. forest), complex (1) rupland corridor (1) uration. Score one or dbl check. ently inundated/saturated (4) ted/saturated (3)
		None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	Check all disturbances observed    J   ditch	point source (non filling/grading road bed/RR trac dredging other_	
6	14	Metric 4. Habitat Alte	eration and Develor	oment.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score one None or none apparent (4) Recovered (3) ✓ Recovering (2) Recent or no recovery (1)	or double check and average.		
		4b. Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2)	one and assign score.		
		✓ Poor (1) 4c. Habitat alteration. Score one or do None or none apparent (9) Recovered (6) ✓ Recovering (3) Recent or no recovery (1)	Check all disturbances observed mowing grazing clearcutting selective cutting	shrub/sapling ren herbaceous/aqua sedimentation dredging	
SI	14 ubtotal this pa	ge	woody debris removal toxic pollutants	farming nutrient enrichme	ent
last revised	d 1 Februa	ry 2001 jjm			

Site: Wetland 2	Rater	(s): Charlie	Allen	Date: 07/13/2022
14 subtotal first page 0 14	etric 5. Special Wetlan	ıds.		
	ck all that apply and score as indicated.  Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-r Lake Plain Sand Prairies (Oak Open Relict Wet Prairies (10) Known occurrence state/federal thre Significant migratory songbird/water Category 1 Wetland. See Question	estricted hydro nings) (10) eatened or enda fowl habitat or	angered species (10) usage (10)	
-3 11 <b>M</b>	etric 6. Plant commun	ities, int	erspersion, microto	ppography.
max 20 pts. subtotal 6a.	Wetland Vegetation Communities.	Vegetation	Community Cover Scale	
Scor	re all present using 0 to 3 scale.  Aquatic bed Emergent	<u>0</u> 1	Absent or comprises <0.1ha (0.24) Present and either comprises sm vegetation and is of moderate of	all part of wetland's quality, or comprises a
	Shrub Forest Mudflats Open water	2	significant part but is of low qua Present and either comprises sign vegetation and is of moderate of part and is of high quality	nificant part of wetland's
	Other	3	Present and comprises significan	t part, or more, of wetland's
	horizontal (plan view) Interspersion.		vegetation and is of high quality	1
Sele	ect only one.			
	High (5)		escription of Vegetation Quality	
	Moderately high(4) Moderate (3)	low	Low spp diversity and/or predomi disturbance tolerant native spec	
	Moderately low (2)	mod	Native spp are dominant compon	
	✓ Low (1)		although nonnative and/or distu	=
	None (0)		can also be present, and specie	•
	Coverage of invasive plants. Refer able 1 ORAM long form for list. Add		moderately high, but generally threatened or endangered spp	w/o presence of rare
	educt points for coverage	high	A predominance of native species	s, with nonnative spp
	Extensive >75% cover (-5)  Moderate 25-75% cover (-3)  Sparse 5-25% cover (-1)		and/or disturbance tolerant nati absent, and high spp diversity a the presence of rare, threatene	ve spp absent or virtually and often, but not always,
	Nearly absent <5% cover (0)	NA 101 - 4	1 O W-4 O	
Cd	Absent (1)	Mudflat and	Open Water Class Quality	
	Microtopography. re all present using 0 to 3 scale.	1	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)	cres)
	Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88	
	O Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	
	0 Standing dead >25cm (10in) dbh	Minustanon	wantu Cassa Caala	
	0 Amphibian breeding pools		raphy Cover Scale	
		0 1	Absent  Present very small amounts or if	more common
		- <u></u>	of marginal quality	
		2	Present in moderate amounts, bu quality or in small amounts of h	ighest quality
44		3	Present in moderate or greater and of highest quality	HOUTIES
11				

End of Quantitative Rating. Complete Categorization Worksheets.

## **ORAM Summary Worksheet**

Charlie Allen 07/13/2022

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

**Complete Wetland Categorization Worksheet.** 

## **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO X	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> 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 X	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 X	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	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?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO X	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 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			
Category 1						

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

Charlie Allen 07/13/2022

### **Background Information**

Name: Charlie Allen

Date: 07/13/2022

Affiliation:

Stantec

Address:

1500 Lake Shore Drive, Suite 100, Columbus, OH 43204

Phone Number:

614-286-4616

e-mail address:

charlie.allen@stantec.com

Name of Wetland: Wetland 3

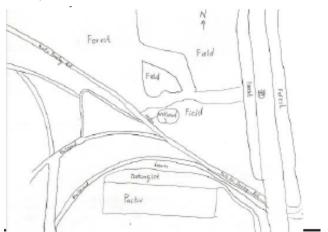
Vegetation Communit(ies):

PFM

HGM Class(es):

Depression

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



Lat/Long or UTM Coordinate 40.01299, -83.1237	
USGS Quad Name Northwest Columbus	
County Franklin	
Township Porter	
Section and Subsection N/A	
Hydrologic Unit Code 050901030205	
Site Visit 07/13/2022	
National Wetland Inventory Map No	
Ohio Wetland Inventory Map No	
Soil Survey Franklin County Soil Survey	
Delineation report/map Wetland and Waterbody Delineation Report	

Name of Wetland: Wetland 3 Wetland Size (acres, hectares): 0.023 Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. Field Forest Wetland 3 Forest Field Railroad Forest Railroad Comments, Narrative Discussion, Justification of Category Changes: Final score: 11 Category: 1

### **Scoring Boundary Worksheet**

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

Charlie Allen Roberts-Hayden Line Extension Project 07/13/2022 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. Identify the locations where there is physical evidence that hydrology Step 2 changes rapidly. Such evidence includes both natural and humaninduced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland. Step 3 Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary. 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. Step 5 In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately. 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.

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.

Roberts-Hayden Line Extension Project Charlie Allen 07/13/2022

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status  Go to Question 2	NO So to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland.  Go to Question 3	NO So to Question 3
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO So 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 <i>Phalaris arundinacea, Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO So 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	NO So to Question 7
7	<b>Fens.</b> 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	NO Solution 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 spags and downed logs?	Wetland is a Category 3 wetland.  Go to Question 8b	NO So to Question 8b

	Charlie Allen		07/13/2022
8b	Mature forested wetlands. Is the wetland a forested wetland with	YES	NO X
	50% or more of the cover of upper forest canopy consisting of		
	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.	
		Category 5 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 NO
	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	Go to Question 90
	iditawara ances of other flyarological controls:	Category 3 status	
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 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 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
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES YES	NO T
••	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 YES	NO I
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		X
	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	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	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
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
	Montgomery, Van Wert etc.).	Complete Quantitative	
	monigomory, van vvoit olo.j.	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: W	etland 3	Rater(s):Charlie Allen	Date: 07/13/2022
0	0	Metric 1. Wetland Area (size).	
max 6 pts.	subtotal	Select one size class and assign score.	
1	1	Metric 2. Upland buffers and surrounding	land use.
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one and assign score. Do not  WIDE. Buffers average 50m (164ft) or more around wetland perimete  MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetlan  NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetl  ✓ VERY NARROW. Buffers average <10m (<32ft) around wetland peri  2b. Intensity of surrounding land use. Select one or double check and average  VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife ar  LOW. Old field (>10 years), shrub land, young second growth forest.  MODERATELY HIGH. Residential, fenced pasture, park, conservation  ✓ HIGH. Urban, industrial, open pasture, row cropping, mining, constru	er (7) nd perimeter (4) land perimeter (1) meter (0) e. ea, etc. (7) (5) on tillage, new fallow field. (3)
7	8	Metric 3. Hydrology.	,
max 30 pts.	subtotal	High pH groundwater (5)  Other groundwater (3)  ✓ Precipitation (1)  Seasonal/Intermittent surface water (3)	ectivity. Score all that apply.  100 year floodplain (1)  Between stream/lake and other human use (1)  Part of wetland/upland (e.g. forest), complex (1)  Part of riparian or upland corridor (1)  ion inundation/saturation. Score one or dbl check.  Semi- to permanently inundated/saturated (4)  Regularly inundated/saturated (3)  Seasonally inundated (2)  Seasonally saturated in upper 30cm (12in) (1)  average.
		Recovered (7)  Recovering (3)  Recent or no recovery (1)  Recovering (3)  Recent or no recovery (1)	point source (nonstormwater) filling/grading road bed/RR track dredging other
6	14	Metric 4. Habitat Alteration and Developm	ent.
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double check and average.  None or none apparent (4) Recovered (3) ✓ Recovering (2) Recent or no recovery (1)  4b. Habitat development. Select only one and assign score.  Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) ✓ Poor (1)	
	14	4c. Habitat alteration. Score one or double check and average.  None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)  Recovering (3) Recent or no recovery (1)	shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging
	14  ubtotal this pa		farming nutrient enrichment
last revised	ı reprua	y 2001 jjiii	

Site: V	/etland :	Rater	s): Charlie	Allen	Date: 07/13/2022
<u> </u>			<u>Oji Onamo</u>	7	
	4.4				
	14				
su	btotal first pa	ge			
0	14	Metric 5. Special Wetlan	ds.		
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-u			
		Lake Erie coastal/tributary wetland-re	•	logy (5)	
		Lake Plain Sand Prairies (Oak Open Relict Wet Prairies (10)	ings) (10)		
		Known occurrence state/federal threa	atened or enda	angered species (10)	
		Significant migratory songbird/water			
1		Category 1 Wetland. See Question		= : :	_
-3	11	Metric 6. Plant communi	ities, int	erspersion, microto	pography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communities.		Community Cover Scale	174
		Score all present using 0 to 3 scale.  Aquatic bed	<u>0</u>	Absent or comprises <0.1ha (0.24  Present and either comprises small	
		1 Emergent	·	vegetation and is of moderate q	•
		Shrub		significant part but is of low qua	-
		Forest Mudflats	2	Present and either comprises signification and is of moderate q	
		Open water		part and is of high quality	uality of comprises a small
		Other	3	Present and comprises significant	t part, or more, of wetland's
		6b. horizontal (plan view) Interspersion.		vegetation and is of high quality	
		Select only one.	Narrativo D	escription of Vegetation Quality	
		High (5)  Moderately high(4)	low	Low spp diversity and/or predoming	nance of nonnative or
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant compone	_
		Low (1) None (0)		although nonnative and/or distu	
		6c. Coverage of invasive plants. Refer		moderately high, but generally v	•
		to Table 1 ORAM long form for list. Add		threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	· · ·
		Extensive >75% cover (-5)  Moderate 25-75% cover (-3)		and/or disturbance tolerant native absent, and high spp diversity a	
		Sparse 5-25% cover (-1)		the presence of rare, threatened	-
		Nearly absent <5% cover (0)		·	
		Absent (1)		Open Water Class Quality	
		6d. Microtopography.  Score all present using 0 to 3 scale.	<u>0</u>	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)	res)
		0 Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88	
		0 Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	
		0 Standing dead >25cm (10in) dbh			
		Amphibian breeding pools	Microtopog	raphy Cover Scale Absent	
			1	Present very small amounts or if r	more common
				of marginal quality	
			2	Present in moderate amounts, bu quality or in small amounts of hi	ghest quality
1	Ī		3	Present in moderate or greater an	nounts
11				and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

## **ORAM Summary Worksheet**

Charlie Allen 07/13/2022

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

**Complete Wetland Categorization Worksheet.** 

## **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO X	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> 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 X	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 X	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	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?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO X	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 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	
Category 1				

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

Charlie Allen 07/13/2022

### **Background Information**

Name: Charlie Allen

Date: 07/13/2022

Affiliation:

Stantec

Address:

1500 Lake Shore Drive, Suite 100, Columbus, OH 43204

Phone Number:

614-286-4616

e-mail address:

charlie.allen@stantec.com

Name of Wetland: Wetland 4

Vegetation Communit(ies):

PEM

HGM Class(es):

Depression

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



Lat/Long or UTM Coordinate 40.01151, -83.1206		
USGS Quad Name Northwest Columbus		
County Franklin		
Township Porter		
Section and Subsection N/A		
Hydrologic Unit Code 050901030205		
Site Visit 07/13/2022		
National Wetland Inventory Map No		
Ohio Wetland Inventory Map No		
Soil Survey Franklin County Soil Survey		
Delineation report/map Wetland and Waterbody Delineation Report		

-t-b-	acre with in Project area, 0.464 total.
atch. Incliide north arrow relationepir	n with other curtage waters venetation zones atc
	Field
	rieid
	wetland 4 Forest as
	wetland Forest M
12/	270
1 100	Darby Road Roject
	Cart V Coct
	X Ro. Xeer
-	1 100
Parking lot	The Road State of the State of
ong lot	Cart.
Pactiv	
activ	
mments, Narrative Discussion, Justifi	ncation of Category Changes:

### **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.

Charlie Allen Roberts-Hayden Line Extension Project 07/13/2022 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. Identify the locations where there is physical evidence that hydrology Step 2 changes rapidly. Such evidence includes both natural and humaninduced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland. Step 3 Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary. 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. Step 5 In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately. 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.

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.

Roberts-Hayden Line Extension Project Charlie Allen 07/13/2022

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status  Go to Question 2	NO So to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland.  Go to Question 3	NO So to Question 3
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO So 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 <i>Phalaris arundinacea, Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO So 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	NO So to Question 7
7	<b>Fens.</b> 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	NO Solution 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 spags and downed logs?	Wetland is a Category 3 wetland.  Go to Question 8b	NO So to Question 8b

	Charlie Allen		07/13/2022
8b	Mature forested wetlands. Is the wetland a forested wetland with	YES	NO X
	50% or more of the cover of upper forest canopy consisting of		
	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.	
		Category 5 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 NO
	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	Go to Question 90
	iditawara ances of other flyarological controls:	Category 3 status	
		Go to Question 10	
9с	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO 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 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
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES YES	NO T
••	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 YES	NO I
	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		X
	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	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	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
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
	Montgomery, Van Wert etc.).	Complete Quantitative	
	monigomory, van vvoit olo.j.	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: V	etiand 4	Rater(s):Charlie Allen	Date: 07/13/2022
2	2	Metric 1. Wetland Area (size).	
max 6 pts.	subtotal	Select one size class and assign score.    >50 acres (>20.2ha) (6 pts)   25 to <50 acres (10.1 to <20.2ha) (5 pts)   10 to <25 acres (4 to <10.1ha) (4 pts)   3 to <10 acres (1.2 to <4ha) (3 pts)   ✓ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)   0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)   <0.1 acres (0.04ha) (0 pts)	
1	3	Metric 2. Upland buffers and surrounding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one and assign score. Do not double check.  WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)  MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)  NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)  VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)  2b. Intensity of surrounding land use. Select one or double check and average.  VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)  LOW. Old field (>10 years), shrub land, young second growth forest. (5)  MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow.  HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)	ow field. (3)
6	9	Metric 3. Hydrology.	
max 30 pts.	subtotal	Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5)  3c. Maximum water depth. Select only one and assign score.  >0.7 (27.6in) (3)  0.4 to 0.7m (15.7 to 27.6in) (2)  Part of wetland/u Part of vetland/u	nin (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) ted/saturated (3)
	Ī	None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)  None or none apparent (12) Check all disturbances observed    J   ditch   point source (nor   filling/grading   dike   J   road bed/RR trace   dredging   dredging   other   Drecovery   dredging   dredgin	
9	18	Metric 4. Habitat Alteration and Development.	
max 20 pts.	subtotal	<ul> <li>4a. Substrate disturbance. Score one or double check and average.  None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select only one and assign score.</li> </ul>	
		Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Very good (6) Additional content of the con	
	18  Ubtotal this pa		atic bed removal
last revised	i 1 Februa	ry 2001 jjm	

7

Site: V	Vetland 4	Rater(	s): Charlie	Allen	Date: 07/13/2022
<u> </u>			O) i O i i a i i i o	7	
	40				
	18				
SL	ıbtotal first pa	ge			
0	18	Metric 5. Special Wetlan	ds.		
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-u			
		Lake Erie coastal/tributary wetland-re Lake Plain Sand Prairies (Oak Openi	•	logy (5)	
		Relict Wet Prairies (10)	90/(10/		
		Known occurrence state/federal threa			
		Significant migratory songbird/water			
		Category 1 Wetland. See Question			
-1	17	Metric 6. Plant communi	ties, int	erspersion, microto	pograpny.
max 20 pts.		Co. Watland Vanatation Communities	Vanatation	Community Cover Cools	
max 20 pts.	subtotal	6a. Wetland Vegetation Communities.  Score all present using 0 to 3 scale.	vegetation	Community Cover Scale Absent or comprises < 0.1ha (0.24)	171 acres) contiguous area
		Aquatic bed	1	Present and either comprises small	
		1 Emergent		vegetation and is of moderate q	
		Shrub	2	significant part but is of low qua	•
		Forest Mudflats	2	Present and either comprises signification and is of moderate q	
		Open water		part and is of high quality	
		Other	3	Present and comprises significant	
		6b. horizontal (plan view) Interspersion.		vegetation and is of high quality	
		Select only one. High (5)	Narrative D	escription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predomin	nance of nonnative or
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)  ✓ Low (1)	mod	Native spp are dominant compone although nonnative and/or distu	_
		None (0)		can also be present, and specie	
		6c. Coverage of invasive plants. Refer		moderately high, but generally v	v/o presence of rare
		to Table 1 ORAM long form for list. Add	In South	threatened or endangered spp	(A)
		or deduct points for coverage  Extensive >75% cover (-5)	high	A predominance of native species and/or disturbance tolerant nativ	· ·
		✓ Moderate 25-75% cover (-3)		absent, and high spp diversity a	
		Sparse 5-25% cover (-1)		the presence of rare, threatened	d, or endangered spp
		Nearly absent <5% cover (0)	Mondflat and	I Onen Water Class Ovelity	
		Absent (1) 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 ac	eres)
		0 Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		O Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh	3	High 4ha (9.88 acres) or more	
		O Standing dead >25cm (10in) dbh O Amphibian breeding pools	Microtopog	raphy Cover Scale	
		<u> </u>	0	Absent	
			1	Present very small amounts or if r	more common
			2	of marginal quality  Present in moderate amounts, bu	t not of highest
			2	quality or in small amounts of hi	
			3	Present in moderate or greater an	<u> </u>
17				and of highest quality	
17					

End of Quantitative Rating. Complete Categorization Worksheets.

## **ORAM Summary Worksheet**

Charlie Allen 07/13/2022

		circle	
		answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	NO	If yes, Category 3.
	Question 4. Significant bird habitat	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	NO	If yes, Category 1.
	Question 6. Bogs	NO	If yes, Category 3.
	Question 7. Fens	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	NO	If yes, Category 3
	Question 11. Relict Wet Prairies	NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
· ·	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	6	
	Metric 4. Habitat	9	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE	17	Category based on score breakpoints Category 1

**Complete Wetland Categorization Worksheet.** 

## **Wetland Categorization Worksheet**

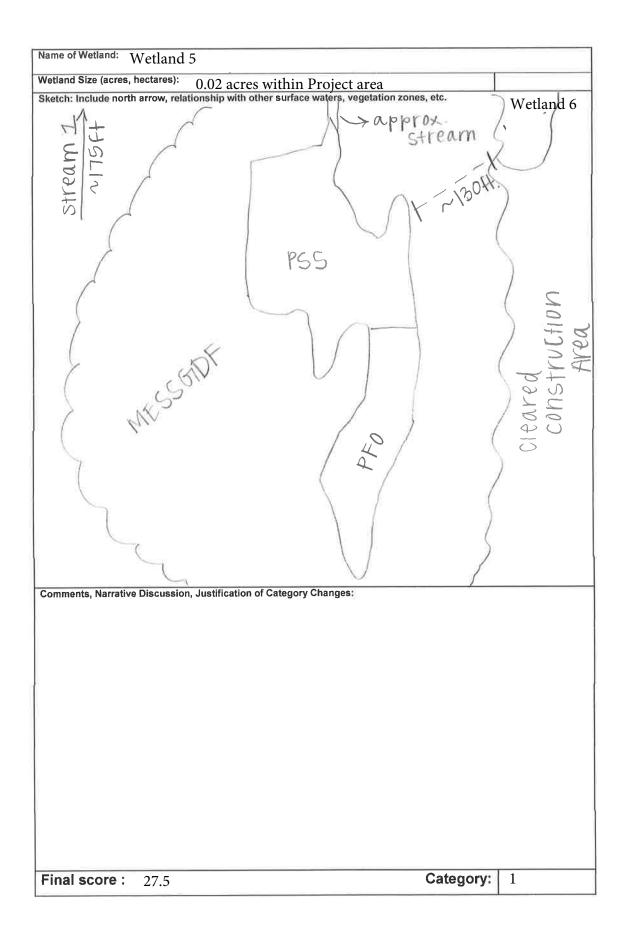
Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO X	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold ( <i>excluding</i> 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 X	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 X	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	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?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO X	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 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		
Category 1					

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

# Background Information

Name: Malea Casey	
Date: 05/02/2023	
Affiliation:	
Stantec consulting services inc.	V
10200 Alliance Rd. SVITE 300 Blue Ash, Ot	145242
Phone Number: (513) 526-4084	
e-mail address: Malea. Casey@Stantec.com	
Name of Wetland: Wetland 5	
Vegetation Communit(ies):	
HGM Class(as): 4	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	1
- ~790H	1
日F	
# ( ? E/B cleared	
Fig Construction	0 1
	17
HS ( ) Area	-1
H ) (( ) )	. 1
T-1	
1/3' ~1,020Ft	
Lat/Long or UTM Coordinate 40.016170 -83.124404	
USGS Quad Name Northwest Columbus, OH	
County Franklin	
Township	
Section and Subsection	
Hydrologic Unit Code 050600011204	
Site Visit 05/02/2023	
National Wetland Inventory Map N/a	
Object Modelland Inventory Man	
Na	
Soil Survey US; Vdorthents, loamy, steep	
Delineation report/map SER ECOLOGICAL SURVEY REPORT	



#### **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.	<b>\</b>	
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.	J	
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.	1	
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.	<b>/</b>	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		×
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.	1	

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	0
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2	NO Go to Question 2
2	has had critical habitat proposed (65 FR 41812 July 6, 2000).  Threatened or Endangered Species. Is the wetland known to contain	YES	(NO)
	an individual of, 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 Database as a high quality wetland?	Wetland is a Category 3 wetland	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland	Go to Question 4	NO
	contain documented 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 hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) hy Phalaris arundinacea, I ythrum 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	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	(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%?	Wetland is a Category 3 wetland	Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	Go to Question 7	(NO)
7	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%?	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	NO Go to Question 8b

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17,7in) dbh?	YES  Wetland should be evaluated for possible Category 3 status.	NO) Go to Question 9a
		Go to Question 9a	6
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this	YES	(NO)
9b	elevation, or along a tributary to Lake Erie that is accessible to fish?  Does the wetland's hydrology result from measures designed to	Go to Question 9b	Go to Question 10
30	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 Category 3 status	Go to Question 9c
_		Go to Question 10	
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	Go to Question 10
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 3 wetland Go to Question 10	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	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 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	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
	Natural Areas and Preserves can provide assistance in confirming this		1
11	type of wetland and its quality.  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	Complete Quantitative Rating
		Rating	

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygademis 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: Wetla	ind 5. Rater(s): M COSEY M.DENZIER Date: 05/02/23
2 2	Metric 1. Wetland Area (size).
max 6 pls. subtota	Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha) (5 pts)  10 to <25 acres (4 to <10.1ha) (4 pts)  3 to <10 acres (1.2 to <4ha) (3 pts)  X 0.3 to <3 acres (0.12 to <1.2ha) (2pts)  0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)  <0.1 acres (0.04ha) (0 pts)
2 4	Metric 2. Upland buffers and surrounding land use.
max 14 pts. subtotal	2a. Calculate average buffer width. Select only one and assign score. Do not double check.  WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)  MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)  NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)  VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)  2b. Intensity of surrounding land use. Select one or double check and average.  VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)  LOW. Old field (>10 years), shrub land, young second growth forest. (5)  MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)  HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)
8 12	Metric 3. Hydrology.
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 only one and assign score.  >0.7 (27.6in) (3)  0.4 to 0.7m (15.7 to 27.6in) (2) <a href="#">(2)</a> Semi- to permanently inundated/saturated (4)  Regularly inundated/saturated (3)  Seasonally inundated (2)  Seasonally saturated in upper 30cm (12in) (1)  3e. Modifications to natural hydrologic regime. Score one or double check and average.
	None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)  Check all disturbances observed  ditch point source (nonstormwater) filling/grading road bed/RR track dredging other other
8.5 20.5	Metric 4. Habitat Alteration and Development.
max 20 pts. subtotal	4a. Substrate disturbance. Score one or double check and average.  None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select only one and assign score.  Excellent (7)  Very good (6)  Good (5)  Moderately good (4)  Fair (3)  Poor to fair (2)
	Poor (1)  4c. Habitat alteration. Score one or double check and average.
20.5	

Site:	Wetlan	d 5	Rater	(s): M.C.	asey M. Denzier Date: 05/02/2:
		1			J
	20.5				
		J			
	subtotal first pa	1		_	
0	20.5	Metr	ic 5. Special Wetlan	ids.	
max 10 pls	. subtotal	Check a	If that apply and score as indicated.		
			Bog (10)		
			Fen (10)		
			Old growth forest (10)		
		-	Mature forested wetland (5)		d-1 (40)
			Lake Erie coastal/tributary wetland-ulake Erie coastal/tributary wetland-r	•	=
		-	Lake Plain Sand Prairies (Oak Open		logy (3)
			Relict Wet Prairies (10)	gu/(.u/	
			Known occurrence state/federal three	atened or enda	angered species (10)
			Significant migratory songbird/water	fowl habitat or	usage (10)
			Category 1 Wetland. See Question	1 Qualitative R	ating (-10)
_	27.5	Metr	ic 6. Plant commun	ities. int	erspersion, microtopography.
7	27.3			,	oropororon, miorotopograpin,
max 20 pts	subtotal	J 6a. Wet	land Vegetation Communities.	Vegetation	Community Cover Scale
- 450.0607			present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
			Aquatic bed	- 1	Present and either comprises small part of wetland's
		2.	Emergent		vegetation and is of moderate quality, or comprises a
			Shrub		significant part but is of low quality
			Forest	2	Present and either comprises significant part of wetland's
			Mudflats		vegetation and is of moderate quality or comprises a small
			Open water		part and is of high quality
		Ch hod	Other	3	Present and comprises significant part, or more, of wetland's
		Select or	zontal (plan view) Interspersion.		vegetation and is of high quality
		CCICCIO	High (5)	Narrative D	escription of Vegetation Quality
			Moderately high(4)	low	Low spp diversity and/or predominance of nonnative or
		×	Moderate (3)	10000	disturbance tolerant native species
			Moderately low (2)	mod	Native spp are dominant component of the vegetation,
			Low (1)		although nonnative and/or disturbance tolerant native spp
			None (0)		can also be present, and species diversity moderate to
			erage of invasive plants. Refer 1 ORAM long form for list. Add		moderately high, but generally w/o presence of rare
			t points for coverage	high	A predominance of native species, with nonnative spp
		or deduc	Extensive >75% cover (-5)	mgn	and/or disturbance tolerant native spp absent or virtually
			Moderate 25-75% cover (-3)		absent, and high spp diversity and often, but not always,
		×	Sparse 5-25% cover (-1)		the presence of rare, threatened, or endangered spp
		/	Nearly absent <5% cover (0)	2	The streethest areas and a streethest areas and a streethest and a streethest areas and a streethest areas and a streethest areas and a streethest areas are a streethest areas and a streethest areas are a streethest areas and a streethest areas are a streethest are a streethest areas are a streethest areas are a streethest are a streethest areas are a streethest ar
			Absent (1)	Mudflat and	Open Water Class Quality
			otopography.	0	Absent <0.1ha (0.247 acres)
		Score al	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)
			Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more
			Standing dead >25cm (10in) dbh	Microtopon	raphy Cover Scale
			Amphibian breeding pools	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
	1				and of highest quality

27.5

End of Quantitative Rating. Complete Categorization Worksheets.

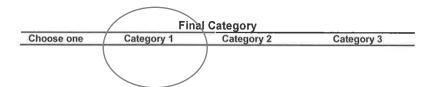
### **ORAM Summary Worksheet**

		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	
Ü	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	8	
	Metric 4. Habitat	8.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	7	
	TOTAL SCORE	27.5	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

### **Wetland Categorization Worksheet**

Choices	Circle one	$\overline{}$	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES  Wetland is categorized as a Category 3 wetland	(NO)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been 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	(Ng)	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	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, 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.



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

# **Background Information**

Name: Malea Casey	
Date: 05/02/2023	
Affiliation	
Stantec consulting services Inc.	
10200 Alliance Road Suite 300 Blue As	sh, 0H 4524
Phone Number: (513)524-4084	
e-mail address: Malea casey@stantec.com	
Name of Wetland: Wetland 6	
Vegetation Communities)	
HGM Class(es): De les estates de la lege de	
HGM Class(es): Depressional	
	[7]
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	1 1 7 1
AZ ( CONST	vctione
Area Area	7
43 \ / }	17
	(1)
H ( )	2 11
	7 1
Lat/Long or UTM Coordinate 40.017723,-83.124457	
USGS Quad Name NOYThWEST COLUMBUS, OH	
County Franklin	
Township	
Section and Subsection	
Hydrologic Unit Code 05 06 000 1 20 +	
Site Visit 0510212023	
National Wetland Inventory Map	
Ohio Wetland Inventory Map	
Soil Survey	
US: Vdorthents, loany, steep	
Delineation report/map See Ecological Survey Report	

Name of Wetland: Wetland 6	
	a
Wetland Size (acres, hectares): 0.002 acres within the Project area Sketch: Include north arrow, relationship with other surface waters, vegetation zero.	ones, etc.
averoting and stream stream	Stream 2
Wetland 1  ACLOSS AW  Wetland 1	Cleared Construction Area
Comments, Narrative Discussion, Justification of Category Changes:	N T
Final again 17	0-4
Final score: 17	Category: 1

#### Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands 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.	$\sqrt{}$	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	/	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	$\checkmark$	
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.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		+
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.	$\sqrt{}$	

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	
arc.			
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2	Go to Question 2
	has had critical habitat proposed (65 FR 41812 July 6, 2000).	CO to Question 2	
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland.	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in	Go to Question 3	(NO)
	Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland	Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland	Go to Question 4 YES	(NO)
4	contain documented 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 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	Bogs. 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 Category 3 status.	Go to Question 9a
		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 Category 3 status	Go to Question 9c
		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 "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	(NO)
	vegetation communities, although non-native or disturbance tolerant	1	
	native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES	NO)
	to sand the president appears to the regulation communities:	Wetland should be evaluated for possible Category 3 status	Go to Question 10
		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	(NO)
	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	Wetland is a Category 3 wetland.	Go to Question 11
	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.	Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
5151	dominated by some or all of the species in Table 1. Extensive prairies	0	
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Category 3 status	Rating
	Montgomery, Van Wert etc.).	Complete Quantitative Rating	

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygademis 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 xglaucu	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:	Wetla	nd 6   Rater(s): M ( d C PM M). Denz 181   Date: 05/02/23
0	0	Metric 1. Wetland Area (size).
max 6 pts.	subtotal	Select one size class and assign score.  >50 acres (>20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha) (5 pts)  10 to <25 acres (4 to <10.1ha) (4 pts)  3 to <10 acres (1.2 to <4ha) (3 pts)  0.3 to <3 acres (0.12 to <1.2ha) (2pts)  0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)  X <0.1 acres (0.04ha) (0 pts)
1	1	Metric 2. Upland buffers and surrounding land use.
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one and assign score. Do not double check.  WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)  MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)  NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)  VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)  2b. Intensity of surrounding land use. Select one or double check and average.  VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)  LOW. Old field (>10 years), shrub land, young second growth forest. (5)  MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)  HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)
7	8	Metric 3. Hydrology.
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 only one and assign score.  >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2)

				11.0	114 D 1	T 1 F/2/22
Site:	Wetl	and 6	Rater(s):	M. Ca	sey and M. Denzler	<b>Date:</b> 5/2/23
15	15 plotal first pa	Metric 5. Special W	4			
		Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (10) Known occurrence state/fe Significant migratory songly Category 1 Wetland. See	i) wetland-unrest wetland-restric Oak Openings) deral threatene oird/water fowl I Question 1 Qua	ted hydrolo (10) ed or endar habitat or u alitative Ra	nggy (5) Ingered species (10) Isage (10) Iting (-10)	
2	17	Metric 6. Plant com	ımunitie	s, inte	erspersion, microto	opograpny.
max 20 pls.	subtotal	6a. Wetland Vegetation Communitie	s. <u>Ve</u>	getation C	ommunity Cover Scale	
		Score all present using 0 to 3 scale.		0	Absent or comprises <0.1ha (0.24	The control of the co
		O Aquatic bed		1	Present and either comprises sm	
		Emergent			vegetation and is of moderate of	2507
		O Shrub	_		significant part but is of low qua	
		Forest		2	Present and either comprises sig	
					vegetation and is of moderate of	quality or comprises a small
		Open water	_		part and is of high quality	
		Other	-	3	Present and comprises significan	
		6b. horizontal (plan view) Interspersi	on.		vegetation and is of high quality	/
		Select only one.				
		High (5)	Na	rrative De	scription of Vegetation Quality	
		Moderately high(4)	-	low	Low spp diversity and/or predomi	nance of nonnative or
		Moderate (3)			disturbance tolerant native spec	cies
		Moderately low (2)	· -	mod	Native spp are dominant compon	ent of the vegetation,
		Low (1)			although nonnative and/or distu	irbance tolerant native spp
		None (0)			can also be present, and specie	es diversity moderate to
		6c. Coverage of invasive plants. Re	fer		moderately high, but generally	w/o presence of rare
		to Table 1 ORAM long form for list.	Add		threatened or endangered spp	
		or deduct points for coverage		high	A predominance of native species	s, with nonnative spp
		Extensive >75% cover (-5)			and/or disturbance tolerant nati	ve spp absent or virtually
		Moderate 25-75% cover (-:	3)		absent, and high spp diversity a	and often, but not always,
		Sparse 5-25% cover (-1)			the presence of rare, threatene	d, or endangered spp
		Nearly absent <5% cover (	(0)			
		Absent (1)	Mu	dflat and	Open Water Class Quality	
		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 ac	
		Vegetated hummucks/tuss	ucks	2	Moderate 1 to <4ha (2.47 to 9.88	3 acres)
		O Coarse woody debris >150	:m (6in)	3	High 4ha (9.88 acres) or more	
		O Standing dead >25cm (10i				
		Amphibian breeding pools	Mi	crotopogra	aphy Cover Scale	
				0	Absent	
			-	1	Present very small amounts or if	more common
			<u> </u>		of marginal quality	
			-	2	Present in moderate amounts, bu	
			92		quality or in small amounts of h	
				3	Present in moderate or greater a	mounts
					and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

## **ORAM Summary Worksheet**

		circle answer or insert	Result
		score	reauit
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3,
	Question 8b, Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE	17	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	NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been 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	NO)	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	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?	VES  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.

Choose one	Category 1	Category 2	Category 3
------------	------------	------------	------------

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

## **Background Information**

Name: Malea casey	
Date: 05/02/23	
Affiliation: Stantce Consulting Services Inc.	
I Address:	115010
Phone Number:	45242
(5/3) 52 6-4094 e-mail address:	
malea. casey@stantec.com	
Name of Wetland 7	
Vegetation Communit(ies):	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	6 1
Stream	
Stream	
Metiano	13 N70FH.
Cleared	111
construction	() 21
Area	5 7
71100	( -11
	(
	4 1
Lat/Long or UTM Coordinate	
40.016913,-83.121213 USGS Quad Name	
County. NorthWest Columbus, OH	
Township	
Section and Subsection	
at an experimental the	
Hydrologic Unit Code 05060001120+	
Site Visit 05/02/23	
National Wetland Inventory Map	
Ohio Wetland Inventory Map	
soil survey Ut. Ud orthents-Urban land complex, gentling	
Delineation report/map See Ecological Survey Report	
July 2011 Solvey 1 Color	

Name of Wetland: Wetland 7			
Wetland Size (acres, hectares): 0.023 acres within project area  Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.			
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	_	4	
	3	Culvery	ì
PSS Stream	7		
ESDF	(		-270
			- All
Cleared	3		1
Area	74	}	
Comments, Narrative Discussion, Justification of Category Changes:	9	<i>\$</i> \	1
Final score : 15 Catego	ory:	1	

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands 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.	<b>/</b>	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.		
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	<b>/</b>	
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.	<b>\( \)</b>	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		*
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.	1	

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	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7,5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17,95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES  Wetland should be evaluated for possible Category 3 status  Go to Question 2	NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES  Wetland is a Category 3 wetland, Go to Question 3	Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES  Wetland is a Category 3 wetland  Go to Question 4	NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <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	NO 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	NO 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 Category 3 status	Go to Question 9a
		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 Category 3 status	Go to Question 9c
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO/
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	Go to Question 9d	Go to Question 10
9d	Does the wetland have a predominance of native species within its	YES	NO.
	vegetation communities, although non-native or disturbance tolerant		2
	native species can also be present?	Wetland is a Category 3 wetland	Go to Question 9e
		Go to Question 10	6
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES	NO
	tolerant hative plant species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status	Go to Question 10
		Go to Question 10	6
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 substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	Wetland is a Category 3 wetland	Go to Question 11
	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.	Go to Question 11	
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 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,	Wetland should be evaluated for possible Category 3 status	Complete Quantitative Rating
	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 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 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		o o
	Solidago ohioensis	J		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site:	V	Vetland 7		Rater(s): M.(dSt)	/ M.	Denzier	Date: 05/0	2/23
0	0	Metric 1.	Wetland A	rea (size).			· ·	
max 6 pts.	subtotal	>50 at 25 to 10 to 3 to < 0.3 to 0.1 to	class and assign scor cres (>20.2ha) (6 pts) <50 acres (10.1 to <20 <25 acres (4 to <10.11 10 acres (1.2 to <4ha <3 acres (0.12 to <1.2 <0.3 acres (0.04 to <0 cres (0.04ha) (0 pts)	0.2ha) (5 pts) ha) (4 pts) ) (3 pts) 2ha) (2pts)				
2	2	Metric 2.	Upland bu	ffers and surrou	nding	land use.		
max 14 pts.	sublotal	WIDE MEDII NARR VERY  2b. Intensity of s VERY LOW, MODE	Buffers average 50r UM. Buffers average COW. Buffers average NARROW. Buffers a surrounding land use. LOW. 2nd growth or Old field (>10 years), ERATELY HIGH. Res	Select only one and assign scorn (164ft) or more around wetlar 25m to <50m (82 to <164ft) arose 10m to <25m (32ft to <82ft) a average <10m (<32ft) around we Select one or double check a older forest, prairie, savannah, shrub land, young second grodential, fenced pasture, park, den pasture, row cropping, minir	nd perimete bund wetlar tround wetland etland perion nd average wildlife are with forest.	er (7) and perimeter (4) and perimeter (1) meter (0) a. a. a. (7) (5) unitiliage, new fallo	w field. (3)	
10	12		Hydrology					
max 30 pts.	subtotal	High p Other Precip Seaso Pereni 3c. Maximum w>0.7 (2 0.4 to -<0.4 m	27.6in) (3) 0.7m (15.7 to 27.6in) (<15.7in) (1)	ce water (3) te or stream) (5) ly one and assign score.	3d. Durati	Part of wetland/up Part of riparian or on inundation/satu Semi- to permane Regularly inundat Seasonally inunda Seasonally satura	in (1) ake and other hum pland (e.g. forest), upland corridor (1) uration. Score one ently inundated/sate ed/saturated (3)	complex (1) ) or dbl check. urated (4)
·		None (Recov	or none apparent (12) ered (7) ering (3) t or no recovery (1)			point source (non: filling/grading road bed/RR track dredging other		
4	16	Metric 4.	Habitat Alt	eration and Deve	elopm	ent.		
max 20 pts.	subtotal	None of Recover Recover Recent Recover Recent Recen	or none apparent (4) ered (3) ering (2) t or no recovery (1) elopment. Select only ant (7) ood (6)	e or double check and average. one and assign score.				
		Moder: Fair (3 Poor to Poor (* 4c. Habitat alters	ately good (4) ) o fair (2) 1)	ouble check and average.  Check all disturbances obser	ved			ľ
เรเม	16	Recovi Recovi Kecen	ered (6) ering (3) t or no recovery (1)	mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	X	shrub/sapling rem herbaceous/aqual sedimentation dredging farming nutrient enrichmen	tic bed removal	

last revised 1 February 2001 jjm

-			ID ( ( )	11.0	16.70	B 1
Site:	Wetlar	nd 7	Rater(s):	M. Cas	sey, M. Denzler	<b>Date</b> : 05/02/2023
O max 10 pts.	16 ubtotal first pa 16 subtotal	Check all that apply and score as Bog (10) Fen (10) Old growth forest (10) Mature forested wetland Lake Erie coastal/tributa Lake Plain Sand Prairie Relict Wet Prairies (10) Known occurrence state	indicated. 1 (5) ary wetland-unrestr ary wetland-restrict s (Oak Openings) (	icted hydr ed hydrolc (10)	ogy (5)	
		Significant migratory so	•		2 , ,	
		Category 1 Wetland. Se	ee Question 1 Qua	litative Ra	ting (-10)	
15	-	Metric 6. Plant co	mmunities	s, inte	erspersion, microto	pography.
max 20 pts.	subtotal	ı 6a. Wetland Vegetation Commun	ities. Ved	etation C	community Cover Scale	
		Score all present using 0 to 3 scal		0	Absent or comprises <0.1ha (0.24	71 acres) contiguous area
		Aquatic hed	-	1	Present and either comprises sma	all part of wetland's
		Emergent			vegetation and is of moderate q	2012
		Shrub	2		significant part but is of low qua	
		Forest		2	Present and either comprises sign	
		Mudflats			vegetation and is of moderate q	uality or comprises a small
		Open water			part and is of high quality	
		Other		3	Present and comprises significant	
		6b. horizontal (plan view) Interspe	ersion.		vegetation and is of high quality	n
		Select only one.	Nav	rative De	scription of Vegetation Quality	
		High (5) Moderately high(4)	, ivai	low	Low spp diversity and/or predomin	nance of nonnative or
		Moderate (3)		1011	disturbance tolerant native spec	
		Moderately low (2)	-	mod	Native spp are dominant compone	
		X Low (1)			although nonnative and/or distu	The second second of the second secon
		None (0)			can also be present, and specie	s diversity moderate to
		6c. Coverage of invasive plants.	Refer		moderately high, but generally v	v/o presence of rare
		to Table 1 ORAM long form for list	t. Add		threatened or endangered spp	
		or deduct points for coverage		high	A predominance of native species	
		Extensive >75% cover (			and/or disturbance tolerant nativ	F F
		★ Moderate 25-75% cover			absent, and high spp diversity a	
		Sparse 5-25% cover (-1			the presence of rare, threatened	i, or endangered spp
		Nearly absent <5% cove	· ·	JEI_4 J	Ower Water Class Coulity	
		Absent (1)	Mu		Open Water Class Quality	
		6d. Microtopography.		1	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 ac	eros)
		Score all present using 0 to 3 scale  Vegetated hummucks/tu		2	Moderate 1 to <4ha (2.47 to 9.88	
		Coarse woody debris >		3	High 4ha (9.88 acres) or more	dores
		Standing dead >25cm (			Ingli ind (0.00 doi:0) of more	
		Amphibian breeding por	•	rotopogr	aphy Cover Scale	
			-	0	Absent	
			-	1	Present very small amounts or if r	more common
			-	2	Present in moderate amounts, bu quality or in small amounts of hi	
	1		-	3	Present in moderate or greater ar and of highest quality	
15			5 <del></del>			

End of Quantitative Rating. Complete Categorization Worksheets.

## **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
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	4	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	Broomer	
	TOTAL SCORE	15	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

### **Wetland Categorization Worksheet**

Choices	Circle one	0	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES  Wetland is categorized as a Category 3 wetland	(NO)	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been 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	(NO)	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	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?	VES  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, 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 of information for this determination should be provided.

	Pin .	al Category	
Choose one	Category 1	Category 2	Category 3

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

#### BEACON STATION PROJECT ECOLOGICAL SURVEY REPORT

Data Forms May 12, 2023

## C.3 HHEI/QHEI DATA FORMS

Headwater Habitat Evaluation Index Field Form HHEI Score (sum of metrics 1+2+3)	41
SITE NAME/LOCATION BEACON Station Project Franklin County  SITE NUMBER Stream RIVER BASIN SCIUTO RIVER CODE DRAINAGE AREA (mir) Z  LENGTH OF STREAM REACH (ft) 180 LAT 40.01392 LONG 83.12239 RIVER MILE Z  DATE 4/12/13 SCORER KLB COMMENTS	
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Inst  STREAM CHANNEL MODIFICATIONS: NONE/NATURAL CHANNEL RECOVERED RECOVERING RECENT OR N	
1. SUBSTRATE (Estimate percent of every type present). Check ONL Ytwo predominant substrate TYPE boxes.  (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B  TYPE  PERCENT  SILT [3 pt]  BLDR SLABS [16 pts]  BEDROCK [16 pts]  BEDROCK [16 pts]  COBBLE (65-256 mm) [12 pts]  GRAVEL (2-64 mm) [9 pts]  SAND (<2 mm) [6 pts]  BIDR SLABS [16 pts]  CLAY or HARDPAN [0 pt]  ARTIFICIAL [3 pts]  Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock  SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:  TOTAL NUMBER OF SUBSTRATE TYPES:	HHEI Metric Points Substrate Max = 40
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):    > 30 centimeters (20 pts)   5 cm - 10 cm [15 pts]   > 22.5 - 30 cm [30 pts]   < 5 cm [5pts]   > 10 - 22.5 cm [25 pts]   NO WATER OR MOIST CHANNEL [0pts]   COMMENTS   MAXIMUM POOL DEPTH (centimeters):	Pool Depth Max = 30
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONL Y one box):    > 4.0 meters (> 13') [30 pts]   > 1.0 m - 1.5 m (> 3' 3' - 4' 8') [15 pts]     > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]   ≤ 1.0 m (≤ 3' 3") [5 pts]     > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]     COMMENTS ON (> 3' 3") [5 pts]   ✓	Bankfull Width Max=30
COMMENTS OF WIVE 3 AVERAGE BANKFULL WIDTH (meters)	
RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream*  RIPARIAN WIDTH L R (Per Bank) L R  Wide >10m Mature Forest, Wetland Moderate 5-10m Marrow <5m None Residential, Park, New Field Open Pasture, Row Cr Fenced Pasture  COMMENTS  RIPARIAN ZONE AND FLOODPLAIN QUALITY (Most Predominant per Bank) L R  Conservation Tillage Urban or Industrial Open Pasture, Row Cr Mining or Construction	ор
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing	nt)
0.5	100 ft)

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

	QHEI PERFORMED? Yes No QHEI Score (If Yes, Attach Completed QHEI form)
M M	DOWNSTREAM DESIGNATED USE(S) WH Name:
□ CA	/H Name: Distance from Evaluated Stream
□ EW	H Name: Distance from Evaluated Stream
	MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.
	Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order:
Count	y: Franklin Township/City: Hilliard, OH
	MISCELLANEOUS
Basel	Flow Conditions? (Y/N): Y Date of last precipitation: 4/4/2023 Quantity: 0, 92"
Photo-	-documentation Notes:
Eievat	ed Turbidity?(Y/N): N Canopy (% open): 100
	samples collected for water chemistry? (Y/N): Lab Sample # or ID (attach results):
Field I	Weasures:Temp (°C) 9,4 Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (umhos/cm)
Is the	sampling reach representative of the stream (Y/N) If not, explain:
Additi	onal comments/description of pollution impacts:
1	45
	BIOLOGICAL OBSERVATIONS (Report all observations below)
Fish C	bserved? (Y/N) N Species observed (if known);
	or Tadpoles Observed? (Y/N) N Species observed (if known):
Salam	anders Observed? (Y/N) N Species observed (if known):
Aquat	ic Macroinvertebrates Observed? (Y/N) N Species observed (if known);
Comm	ents Regarding Biology:
=	
) <del></del>	DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)
	Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
	The ded
1	Wi ade
l	260/19
FLOW	Jear Reth >
1	Cleared 19 raded
	Westerny
	Jupland drainage
	upland drainage
	teature

# **OhioEPA**

# Qualitative Habitat Evaluation Index and Use Assessment Field Sheet



Stream & Location: Stream 2			
SITEATITY LOCATION, STIERM Z	Beacon Station Pro	ject RI	M: Date: 4   12   202
Franklin Co., Ohio	Scorers Full	I Name & Affiliation: Y	ate Bomas Stanice
River Code:		ot./Long. 40.01754	/83 .12310 Office verified □
1] SUBSTRATE Check ONLY Two su	bstrate TYPE BOXES;		
estimate % or note e	OTHER TYPES	ORIGIN	(Or 2 & average)  QUALITY
BLDR /SLABS [10]	OTHER TYPES POOL RIFF	LIMESTONE [1]	HEAVY [-2]
BOULDER [9]	DETRITUS [3]	TILLS [1]	MODERATE [-1] Substrate
COBBLE [8]	☐ ☐ MUCK [2]	☐ WETLANDS [0]	□ NORMAL [0]
GRAVEL [7] × X	SILT [2] ×××	☐ HARDPAN [0]	DEA EXTENSIVE [-2]
☐ SAND [6]	Score natural substrates; ign	C ☐ SANDSTONE [0]	MODERATE [-1]
NUMBER OF BEST TYPES: 4	or more [2] sludge from point-source	ces) LACUSTURINE [0]	DDEO EXTENSIVE [-2] Moderate [-1] Maximum 20 NONE [1]
Comments X3	or less [0]	SHALE [-1]	□ NONE [1]
,		☐ COAL FINES [-2]	
2] INSTREAM COVER Indicate pres	sence 0 to 3: 0-Absent; 1-Very small	amounts or if more common of	marginal AMOUNT
quality; 3-Highest quality in moderate or	oderate amounts, but not of highest of	quality or in small amounts of h	ighest Objects ONE (O. C. C.
diameter log that is stable, well develope	d rootwad in deep / fast water, or der	ep, well-defined, functional pod	ls.   EXTENSIVE >75% [11]
UNDERCUT BANKS [1]		_ OXBOWS, BACKWATERS	
OVERHANGING VEGETATION [1] SHALLOWS (IN SLOW WATER) [		_ AQUATIC MACROPHYTES LOGS OR WOODY DEBRIS	
ROOTMATS [1]	.] bootstko[i]	_ LOGD ON WOOD! DEBNIK	Cover
Comments			Maximum 4
			20
3] CHANNEL MORPHOLOGY Che	eck ONE in each category (Or 2 & av		
SINUOSITY DEVELOPMEN		STABILITY	
☐ HIGH [4] ☐ EXCELLENT [7]		HIGH [3]	
☐ MODERATE [3] ☐ GOOD [5]  ☐ LOW [2] ☐ FAIR [3]	RECOVERED [4] RECOVERING [3]	MODERATE [2]	5-2
□ NONE [1] □ POOR [1]	RECENT OR NO RECOVER		Channel
Comments			Maximum 20
9)			
4] BANK EROSION AND RIPAR. River right looking downstream			er bank & average)
FROMEN L R	I R	LOOD PLAIN QUALITY	L B
	> 50m [4]		
	RATE 10-50m [3] X X SHRUB	OR OLD FIELD [2]	CONSERVATION TILLAGE [1]
MODERATE [2]	RATE 10-50m [3]	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1]	☐ ☐ CONSERVATION TILLAGE [1] ☐ ☐ URBAN OR INDUSTRIAL [0] ☑ ☑ MINING / CONSTRUCTION [0]
☐ ☐ HEAVY / SEVERE [1] ☐ ☑ VERY	RATE 10-50m [3]	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1]	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s)
HEAVY / SEVERE [1] VERY	RATE 10-50m [3]	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1]	URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0]  Indicate predominant land use(s) past 100m riparian. Riparian
☐ ☐ HEAVY / SEVERE [1] ☐ ☑ VERY	RATE 10-50m [3]	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1]	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s)
Comments	RATE 10-50m [3]	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1]	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s) past 100m riparian. Riparian Maximum
Comments 2  5] POOL / GLIDE AND RIFFLE /	RATE 10-50m [3]	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1]	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s) past 100m riparian. Riparian Maximum
The Heavy I Severe [1] Very Very None  Comments  5] POOL / GLIDE AND RIFFLE /  MAXIMUM DEPTH CHA	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] POPEN P  RUN QUALITY ANNEL WIDTH CI	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1] PASTURE, ROWCROP [0]	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s) past 100m riparian. Riparian Maximum 10
The Heavy I Severe [1] Very Very None  Comments  5] POOL / GLIDE AND RIFFLE /  MAXIMUM DEPTH CHA  Check ONE (ONLY!) Check O  POOL WID	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] POPEN P  RUN QUALITY ANNEL WIDTH ONE (Or 2 & average) TH > RIFFLE WIDTH [2] TORRE	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] PASTURE [1] PASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1]	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s) past 100m riparian.  Riparian Maximum 10  Recreation Potential Primary Contact Secondary Contact
The Heavy I Severe [1] Very Very None  Comments  5] POOL / GLIDE AND RIFFLE /  MAXIMUM DEPTH CHA  Check ONE (ONLY!) Check O  1 > 1m [6] POOL WID  1-0.7<1m [4] POOL WID	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] POPEN P  RUN QUALITY ANNEL WIDTH ONE (Or 2 & average) TH > RIFFLE WIDTH [2] TORRE TH = RIFFLE WIDTH [1] VERY	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] PASTURE [1] PASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1]	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s) past 100m riparian.  Riparian Maximum 10  Recreation Potential Primary Contact Secondary Contact (circle one and comment on back)
The Heavy I Severe [1] Very Very None  Comments  5] POOL / GLIDE AND RIFFLE /  MAXIMUM DEPTH CHA  Check ONE (ONLY!) Check O  1 > 1m [6] POOL WID  1 0.4<0.7m [2] POOL WID	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] POPEN P  RUN QUALITY ANNEL WIDTH ONE (Or 2 & average) TH > RIFFLE WIDTH [1] VERY TH > RIFFLE WIDTH [0] FAST [1]	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] PASTURE, [1]  VASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1] INTERSTITIAL [1] INTERMITTEN	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s) past 100m riparian.  Riparian Maximum 10  Recreation Potential Primary Contact Secondary Contact (circle one and comment on back)  T [-2]
The Heavy I Severe [1] Very Very None  Comments  5] POOL / GLIDE AND RIFFLE / MAXIMUM DEPTH  Check ONE (ONLY!) Check Cone (ONLY!)    > 1m [6] POOL WID   0.4<0.7m [2] POOL WID   0.2<0.4m [1]	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] POPEN P  RUN QUALITY ANNEL WIDTH ONE (Or 2 & average) TH > RIFFLE WIDTH [1] VERY TH > RIFFLE WIDTH [0] FAST [ MODE	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] PASTURE [1] PASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1]	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s) past 100m riparian.  Riparian Maximum 10  Recreation Potential Primary Contact Secondary Contact (circle one and comment on back)  Pool / Current
The Heavy I Severe [1] Very Very None  Comments  5] POOL / GLIDE AND RIFFLE / MAXIMUM DEPTH  Check ONE (ONLY!)  Check ONE (ONLY!)  POOL WID  10.4-<0.7m [2]  0.2-<0.4m [1]	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] POPEN P  RUN QUALITY ANNEL WIDTH ONE (Or 2 & average) TH > RIFFLE WIDTH [1] VERY TH > RIFFLE WIDTH [0] FAST [ MODE	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] PASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1] INTERSTITIAL [1] INTERMITTEN RATE [1] EDDIES [1]	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s) past 100m riparian.  Riparian Maximum 10  Recreation Potential Primary Contact Secondary Contact (circle one and comment on back)  T [-2]
The Heavy I Severe [1] Very Very None  Comments  5] POOL / GLIDE AND RIFFLE / None  MAXIMUM DEPTH CHA  Check ONE (ONLY!) Check ONE    > 1m [6] POOL WID    0.4<0.7m [2] POOL WID    0.2<0.4m [1]    < 0.2m [0] Maximum  Comments	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] PENCE [0] POPEN P  RUN QUALITY ANNEL WIDTH ONE (Or 2 & average) TH > RIFFLE WIDTH [1] VERY TH > RIFFLE WIDTH [0] FAST [ MODE Indica	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1] PASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1] INTERSTITIAL [1] INTERMITTEN RATE [1] EDDIES [1] ate for reach - pools and riffles.	URBAN OR INDUSTRIAL [0]   MINING / CONSTRUCTION [0]   Indicate predominant land use(s) past 100m riparian.   Riparian Maximum 10     Recreation Potential Primary Contact Secondary Contact (circle one and comment on back)   T [-2]   Pool / Current Maximum 12   Population
The Heavy I severe [1] Very Very Very None  Comments  5] POOL / GLIDE AND RIFFLE / MAXIMUM DEPTH CHA  Check ONE (ONLY!) Check Comments  Check ONE (ONLY!) Check Comments  POOL WID POOL WID POOL WID One of the comments  Indicate for functional riffles of riffle-obligate species:	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCEL [0] PENCEL [0] PENCEL [0] POPEN P  RUN QUALITY ANNEL WIDTH ONE (Or 2 & average) TH > RIFFLE WIDTH [2] TORRE TH > RIFFLE WIDTH [1] VERY TH > RIFFLE WIDTH [0] FAST [ MODE Indicates:  Style="text-align: center;"> HODE INDICATES Check ONE (Or 2 & average)  Check ONE (Or 2 & average)  Check ONE (Or 2 & average)	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1] D PASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1] INTERSTITIAL [1] INTERMITTEN RATE [1] EDDIES [1] ate for reach - pools and riffles.  enough to support a p average).	URBAN OR INDUSTRIAL [0]  MINING / CONSTRUCTION [0]  Indicate predominant land use(s) past 100m riparian.  Riparian Maximum 10  Recreation Potential Primary Contact Secondary Contact (circle one and comment on back)  T [-2]  Pool / Current Maximum 12  Deputation  NO RIFFLE [metric=0]
The Heavy I severe [1] Very Very Very None  Comments  5] POOL / GLIDE AND RIFFLE / MAXIMUM DEPTH CHA  Check ONE (ONLY!) Check Comments    Doctor   Check Comments   Check Commen	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] PENCE [0] PENC [0] PENCE [0] PENCE [0] PENCE [0] PENCE [0] PENCE [0] PENCE [0]	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1] PASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1] INTERSTITIAL [1] INTERMITTEN RATE [1] EDDIES [1] ate for reach - pools and riffles.  enough to support a p average). SUBSTRATE RIFFLE	URBAN OR INDUSTRIAL [0]   MINING / CONSTRUCTION [0]   Indicate predominant land use(s) past 100m riparian. Riparian Maximum 10   Recreation Potential Primary Contact Secondary Contact (circle one and comment on back)   T [-2]   Pool / Current Maximum 12   Opulation
The Heavy I Severe [1] Very Very Very None  Comments  5] POOL / GLIDE AND RIFFLE / MAXIMUM DEPTH CHA  Check ONE (ONLY!) Check Comments    Doctor   Check Comment   Check Comme	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] PENCE [0	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] PASTURE [1]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1] INTERSTITIAL [1] INTERMITTEN RATE [1] EDDIES [1] ate for reach - pools and riffles.  enough to support a p average).  SUBSTRATE RIFFLE	URBAN OR INDUSTRIAL [0]   Indicate predominant land use(s) past 100m riparian. Riparian Maximum 10     Recreation Potential Primary Contact Secondary Contact (circle one and comment on back)   T [-2]   Pool/Current Maximum 12     Pool/Current Maximum 1
The angle of the control of the cont	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] PENCE [0	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1] PASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1] INTERSTITIAL [1] INTERMITTEN RATE [1] EDDIES [1] ate for reach - pools and riffles.  enough to support a p average).  SUBSTRATE RIFFLE bbble, Boulder) [2] .g., Large Gravel) [1]	URBAN OR INDUSTRIAL [0]   Indicate predominant land use(s) past 100m riparian.   Riffle   Recreation Potential   Primary Contact   Secondary Contact   Secondary Contact   (circle one and comment on back)   T [-2]   Pool   Current   Maximum   12   Current   Current   Maximum   12   Current   Current
HEAVY   SEVERE [1]   VERY   VERY   NONE   Comments   NONE   Comments   Severe [1]   VERY   NONE   Comments   Severe [1]   NONE   Comments   Chack Of Comments   Check Of Comments   Comme	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] PENCE [0	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] PASTURE [1]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1] INTERSTITIAL [1] INTERMITTEN RATE [1] EDDIES [1] ate for reach - pools and riffles.  enough to support a p average).  SUBSTRATE RIFFLE	URBAN OR INDUSTRIAL [0]   Indicate predominant land use(s) past 100m riparian.   Riffle   Recreation Potential   Primary Contact   Secondary Contact   Secondary Contact   (circle one and comment on back)   T [-2]   Pool   Current   Maximum   12   Current   Current   Maximum   12   Current   Current
HEAVY   SEVERE [1]   VERY   VERY   NONE	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] PENCE [0	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1] PASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1] INTERSTITIAL [1] INTERMITTEN RATE [1] EDDIES [1] ate for reach - pools and riffles.  enough to support a p average).  SUBSTRATE RIFFLE bbble, Boulder) [2] .g., Large Gravel) [1]	URBAN OR INDUSTRIAL [0]   MINING / CONSTRUCTION [0]   Indicate predominant land use(s)   past 100m riparian. Riparian   Maximum   10    Recreation Potential   Primary Contact   Secondary Contact   Secondary Contact   (circle one and comment on back)   T [-2]   Pool / Current   Maximum   12    Opulation   NO RIFFLE [metric=0]   NONE [2]   Low [1]
HEAVY   SEVERE [1]   VERY   VERY   NONE   Comments   NONE   Comments   VERY   NONE   Comments   NONE   NONE     Severe [1]   VERY   NONE   NONE     NONE   NONE   NONE   NONE     MAXIMUM DEPTH   CHA   Check ONE (ONLY!)   Check ONE   POOL WID   NOOL WID	RATE 10-50m [3] SHRUB OW 5-10m [2] RESIDE NARROW < 5m [1] FENCE [0] PENCE [0	OR OLD FIELD [2] NTIAL, PARK, NEW FIELD [1] D PASTURE [1] D PASTURE, ROWCROP [0]  URRENT VELOCITY Check ALL that apply ENTIAL [-1] SLOW [1] FAST [1] INTERMITTEN RATE [1] DDIES [1] ate for reach - pools and riffles.  enough to support a p average). SUBSTRATE RIFFLE Dbble, Boulder) [2] .g., Large Gravel) [1] Fine Gravel, Sand) [0]	URBAN OR INDUSTRIAL [0]   Indicate predominant land use(s) past 100m riparian.   Riffle   Recreation Potential   Primary Contact   Secondary Contact   Secondary Contact   (circle one and comment on back)   T [-2]   Pool   Current   Maximum   12   Current   Current   Maximum   12   Current   Current

Check ALL that apply	Asiatic dams.	wood ducks	127	are e <sup>b</sup> e	
METHOD STAGE					
BOAT 1st -sample pass-2nd - HIGH		DHWM = 14' BF = 20'			
L LINE UP					
DISTANCE DRY					
□ 0.5 Km □ 0.2 Km □ 0.15 Km □ 0.15 Km □ 0.12 Km □ 0.12 Km □ 20 cm □ 20-<40 cm □ 40-70 cm □ > 70 cm/ CTB □ > 70 cm/ CTB □ SECCHI DEPTH□  CANOPY □ > 85% - OPEN □ 30% - <55% □ 30% - <55% □ 10% - <30% □ CLARITY □ sample pass - 2nd □ 20 cm □ 20 cm □ 20 cm □ > 70 cm/ CTB □ > 70 cm	BJAESTHETICS  NUISANCE ALGAE INVASIVE MACROPHYTES EXCESS TURBIDITY DISCOLORATION FOAM / SCUM OIL SHEEN TRASH / LITTER NUISANCE ODOR SLUDGE DEPOSITS CSOs/SSOs/OUTFALLS  ATION AREA DEPTH POOL: >100ft2 > 3ft	PUBLIC PRIVATE BOTH / NA ACTIVE HISTORIC / BOTH / NA YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED MODIFIED / DIPPED OUT / NA LEVEED / ONE SIDED RELOCATED / CUTOFFS MOVING-BEDLOAD-STABLE ARMOURED / SLUMPS ISLANDS / SCOURED IMPOUNDED / DESICCATED FLOOD CONTROL / DRAINAGE	Circle some & COMMENT	E/ISSUES  WWTP / CSO / NPDES / INDUSTRY HARDENED / URBAN / DIRT&GRIME CONTAMINATED / LANDFILL BMPs-CONSTRUCTION-SEDIMENT LOGGING / IRRIGATION / COOLING BANK / EROSION / SURFACE FALSE BANK / MANURE / LAGOON WASH H <sub>2</sub> 0 / TILE / H <sub>2</sub> 0 TABLE ACID / MINE / QUARRY / FLOW NATURAL / WETLAND / STAGNANT PARK / GOLF / LAWN / HOME ATMOSPHERE / DATA PAUCITY	F] MEASUREMENTS  x̄ width x̄ depth max. depth x̄ bankfull width bankfull x̄ depth W/D ratio bankfull max. depth floodprone x² width entrench. ratio Legacy Tree:
Stream Drawing:			W.	44	
$\sim$			. /		
. *	~ >		1		
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	S/mole boy	enstancial services	necessary 3	Hurst No!	) Run Robble
10 % S. 10 % S	minimal	ore wording	(	Mixed	early successive line
Mi	yed forcet				
	Roy Field active struct				

#### BEACON STATION PROJECT ECOLOGICAL SURVEY REPORT

Representative Photographs May 12, 2023

## Appendix D REPRESENTATIVE PHOTOGRAPHS

### D.1 WETLAND AND WATERBODY PHOTOGRAPHS





Photograph Location 1. View of Wetland 1. Photograph taken facing north.



Photograph Location 1. View of Wetland 1. Photograph taken facing east.





Photograph Location 1. View of Wetland 1. Photograph taken facing south.



Photograph Location 1. View of Wetland 1. Photograph taken facing west.





Photograph Location 1. View of soil profile at wetland determination sample point location SP01.



Photograph Location 1. View of Wetland 1. Photograph taken facing north.





Photograph Location 1. View of Wetland 1. Photograph taken facing east.



Photograph Location 1. View of Wetland 1. Photograph taken facing south.





Photograph Location 1. View of Wetland 1. Photograph taken facing west.



Photograph Location 2. View of upland (old field habitat) at wetland determination sample point location SP02. Photograph taken facing west.





Photograph Location 2. View of soil profile at wetland determination sample point location SP02.



Photograph Location 2. View of upland (old field habitat and existing paved road) at wetland determination sample point location SP02. Photograph taken facing east.





Photograph Location 2. View of upland (old field habitat and existing paved road) at wetland determination sample point location SP02. Photograph taken facing west.



Photograph Location 3. View of Wetland 2. Photograph taken facing north.





Photograph Location 3. View of Wetland 2. Photograph taken facing east.



Photograph Location 3. View of Wetland 2. Photograph taken facing south.





Photograph Location 3. View of Wetland 2. Photograph taken facing west.



Photograph Location 3. View of soil profile at wetland determination sample point location SP03.





Photograph Location 3. View of Wetland 2. Photograph taken facing north.



Photograph Location 3. View of Wetland 2. Photograph taken facing east.





Photograph Location 3. View of Wetland 2. Photograph taken facing south.



Photograph Location 3. View of Wetland 2. Photograph taken facing west.





Photograph Location 4. View of upland (old field habitat) at wetland determination sample point location SP04. Photograph taken facing east.



Photograph Location 4. View of soil profile at wetland determination sample point location SP04.





Photograph Location 4. View of upland (old field habitat and existing paved road) at wetland determination sample point location SP04. Photograph taken facing east.



Photograph Location 4. View of upland (old field habitat and existing paved road) at wetland determination sample point location SP04. Photograph taken facing west.





Photograph Location 5. View of Wetland 3. Photograph taken facing north.



Photograph Location 5. View of Wetland 3. Photograph taken facing east.





Photograph Location 5. View of Wetland 3. Photograph taken facing south.



Photograph Location 5. View of Wetland 3. Photograph taken facing west.





Photograph Location 5. View of soil profile at wetland determination sample point location SP05.



Photograph Location 5. View of Wetland 3. Photograph taken facing north.





Photograph Location 5. View of Wetland 3. Photograph taken facing east.



Photograph Location 5. View of Wetland 3. Photograph taken facing south.





Photograph Location 5. View of Wetland 3. Photograph taken facing west.



Photograph Location 6. View of upland (old field habitat) at wetland determination sample point location SP06. Photograph taken facing west.





Photograph Location 6. View of soil profile at wetland determination sample point location SP06.



Photograph Location 6. View of upland (maintained lawn and existing paved road) at wetland determination sample point location SP06. Photograph taken facing east.





Photograph Location 6. View of upland (old field habitat and existing paved road) at wetland determination sample point location SP06. Photograph taken facing west.



Photograph Location 7. View of existing culvert and upland drainage feature. Photograph taken facing southeast.





Photograph Location 8. View of upland drainage feature. Photograph taken facing southwest.



Photograph Location 8. View of upland drainage feature. Photograph taken facing east.





Photograph Location 9. View of upland drainage feature. Photograph taken facing north.



Photograph Location 9. View of upland drainage feature. Photograph taken facing southeast.





Photograph Location 10. View of Stream 1. Photograph taken facing upstream/west.



Photograph Location 10. View of Stream 1. Photograph taken facing downstream/east.





Photograph Location 10. View of typical substrates of Stream 1.



Photograph Location 11. View of Wetland 4. Photograph taken facing north.





Photograph Location 11. View of Wetland 4. Photograph taken facing east.



Photograph Location 11. View of Wetland 4. Photograph taken facing south.





Photograph Location 11. View of Wetland 4. Photograph taken facing west.



Photograph Location 11. View of soil profile at wetland determination sample point location SP07.





Photograph Location 11. View of Wetland 4. Photograph taken facing north.



Photograph Location 11. View of Wetland 4. Photograph taken facing east.





Photograph Location 11. View of Wetland 4. Photograph taken facing south.



Photograph Location 11. View of Wetland 4. Photograph taken facing west.





Photograph Location 12. View of upland (old field habitat) at wetland determination sample point location SP08. Photograph taken facing west.



Photograph Location 12. View of soil profile at wetland determination sample point location SP08.





Photograph Location 12. View of upland (maintained lawn habitat) at wetland determination sample point location SP08. Photograph taken facing north.



Photograph Location 12. View of upland (maintained lawn habitat) at wetland determination sample point location SP08. Photograph taken facing east.





Photograph Location 13. Representative view of an upland drainage feature within the Project area. Photograph taken facing east.



Photograph Location 13. Representative view of an upland drainage feature within the Project area. Photograph taken facing south.





Photograph Location 14. View of existing culvert and downstream portion of Stream 1. Photograph taken facing upstream/west.



Photograph Location 14. View of downstream portion of Stream 1. Photograph taken facing downstream/east.





Photograph Location 14. View of typical substrates of Stream 1.



Photograph Location 15. Representative view of an existing culvert within the Project area. Photograph taken facing east.





Photograph Location 16. View of existing culvert and downstream portion of Stream 2. Photograph taken facing upstream/west.



Photograph Location 16. View of downstream portion of Stream 2. Photograph taken facing downstream/east.





Photograph Location 16. View of typical substrates of Stream 2.



Photograph Location 17. View of upstream portion of Stream 2. Photograph taken facing upstream/west.





Photograph Location 17. View of existing culvert and upstream portion of Stream 2. Photograph taken facing downstream/east.



Photograph Location 17. View of typical substrates of Stream 2.





Photograph Location 18. Representative view of upland drainage feature. Photograph taken facing west.



Photograph Location 18. Representative view of upland drainage feature. Photograph taken facing east.





Photograph Location 19. Representative view of upland drainage feature. Photograph taken facing west.



Photograph Location 19. Representative view of upland drainage feature. Photograph taken facing east.





Photograph Location 20. Representative view of existing culvert and upland drainage feature. Photograph taken facing southwest.



Photograph Location 20. Representative view of upland drainage feature. Photograph taken facing northeast.





Photograph Location 21. Representative view of upland drainage feature. Photograph taken facing southwest.



Photograph Location 21. Representative view of upland drainage feature. Photograph taken facing northeast.





Photograph Location 22. Representative view of upland drainage feature. Photograph taken facing north.



Photograph Location 22. Representative view of upland drainage feature. Photograph taken facing east.





Photograph Location 23. Representative view of existing culvert and upland drainage feature. Photograph taken facing northeast.



Photograph Location 24. View of Wetland 5. Photograph taken facing north.





Photograph Location 24. View of Wetland 5. Photograph taken facing east.



Photograph Location 24. View of Wetland 5. Photograph taken facing south.





Photograph Location 24. View of Wetland 5. Photograph taken facing west.



Photograph Location 24. View of soil profile at wetland determination sample point location SP09.





Photograph Location 25. View of upland (mixed early successional/second growth deciduous forest habitat) at wetland determination sample point location SP10. Photograph taken facing east.



Photograph Location 25. View of upland (old field habitat) at wetland determination sample point location SP10. Photograph taken facing south.





Photograph Location 25. View of soil profile at wetland determination sample point location SP10.



Photograph Location 26. View of Wetland 6. Photograph taken facing north.





Photograph Location 26. View of Wetland 6. Photograph taken facing east.



Photograph Location 26. View of Wetland 6. Photograph taken facing south.





Photograph Location 26. View of Wetland 6. Photograph taken facing west.



Photograph Location 26. View of soil profile at wetland determination sample point location SP11.





Photograph Location 27. View of upland (recently graded area) at wetland determination sample point location SP12. Photograph taken facing east.



Photograph Location 27. View of upland (recently graded area) at wetland determination sample point location SP12. Photograph taken facing south.





Photograph Location 27. View of soil profile at wetland determination sample point location SP12.



Photograph Location 28. View of downstream portion of Stream 2. Photograph taken facing upstream/west.





Photograph Location 28. View of downstream portion of Stream 2. Photograph taken facing downstream/east.



Photograph Location 28. View of substrates of Stream 2.





Photograph Location 29. View of Wetland 7. Photograph taken facing north.



Photograph Location 29. View of Wetland 7. Photograph taken facing east.





Photograph Location 29. View of Wetland 7. Photograph taken facing south.



Photograph Location 29. View of Wetland 7. Photograph taken facing west.





Photograph Location 29. View of soil profile at wetland determination sample point location SP13.



Photograph Location 30. View of upland (mixed early successional/second growth deciduous forest) at wetland determination sample point location SP14. Photograph taken facing east.





Photograph Location 30. View of upland (recently graded area) at wetland determination sample point location SP14. Photograph taken facing south.



Photograph Location 30. View of soil profile at wetland determination sample point location SP14.

#### BEACON STATION PROJECT ECOLOGICAL SURVEY REPORT

Representative Photographs May 12, 2023

### D.2 HABITAT PHOTOGRAPHS





Photograph Location 1. Representative view of existing paved road and old field habitat within the Project area. Photograph taken facing east.



Photograph Location 2. Representative view of recently graded area within the Project area.

Photograph taken facing west.





Photograph Location 3. Representative view of mixed early successional second growth deciduous forest habitat within the Project area (area has since been graded). Photograph taken facing north.



Photograph Location 3. Representative view of recently graded area and mixed early successional/second growth deciduous forest habitat within the Project area. Photograph taken facing north.





Photograph Location 3. Representative view of old field habitat within the Project area (area has since been graded). Photograph taken facing south.



Photograph Location 4. Representative view of recently graded area within the Project area and early successional deciduous forest located just outside of the Project area. Photograph taken facing north.





Photograph Location 5. Representative view of recently graded area within the Project area. Photograph taken facing west.



Photograph Location 6. Representative view of mixed early successional second growth deciduous forest habitat within the Project area. Photograph taken facing north.





Photograph Location 7. Representative view of recently graded area within the Project area. Photograph taken facing east.

#### BEACON STATION PROJECT ECOLOGICAL SURVEY REPORT

Agency Correspondence May 12, 2023

### Appendix E AGENCY CORRESPONDENCE



### 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

July 18, 2022

Matthew Teitt Stantec 1500 Lake Shore Drive Suite 100 Columbus, OH 43204

Re: 22-0635; AEP Beacon Station and Hayden-Roberts Line Extension Project

**Project:** The proposed project involves the extension of the existing Hayden-Roberts 345 kV Line and the new installation of Beacon Station.

**Location:** The proposed project is located in Norwich Township, Franklin County, Ohio.

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

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

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

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

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

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the

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

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "Range-wide Indiana Bat 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 following listed mussel species.

#### Federally Endangered

clubshell (*Pleurobema clava*)
rayed bean (*Villosa fabalis*)
northern riffleshell (*Epioblasma torulosa rangiana*)
snuffbox (*Epioblasma triquetra*)
purple cat's paw (*Epioblasma o. obliquata*)

#### Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

#### State Endangered

elephant-ear (Elliptio crassidens crassidens)

pocketbook (Lampsilis ovata)

long solid (Fusconaia maculata maculate)

washboard (Megalonaias nervosa)

Ohio pigtoe (*Pleurobema cordatum*)

#### State Threatened

pondhorn (*Uniomerus tetralasmus*)

Salamander Mussel (Simpsonaias ambigua)

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.

The project is within the range of the following listed fish species.

State Endangered

goldeye (*Hiodon alosoides*) shortnose gar (*Lepisosteus platostomus*) Iowa darter (*Etheostoma exile*) spotted darter (*Etheostoma maculatum*) northern brook lamprey (*Ichthyomyzon fossor*) tonguetied minnow (*Exoglossum laurae*) popeye shiner (*Notropis ariommus*)

#### State Threatened

lake chubsucker (Erimyzon sucetta) paddlefish (Polyodon spathula)

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 these or other aquatic species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. 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, the project is not likely to impact this species.

The project is within the range of the black-crowned night-heron (*Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round. Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. 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 lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 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 least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open 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 sandhill crane (*Grus canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through august 31. If this habitat will not be impacted, this project is not likely to have an impact on 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 <u>local floodplain administrator</u> should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at <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 
 From:
 Ohio, FW3

 To:
 Teitt, Matthew

Cc: nathan.reardon@dnr.state.oh.us; Wyza, Eileen

Subject: AEP Beacon Station and Hayden-Roberts 345 kV Line Extension Project, Franklin County, Ohio

**Date:** Monday, July 11, 2022 6:36:06 PM

Attachments: <u>image.png</u>

image.png



Project Code: 2022-0054381

Dear Mr. Teitt,

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

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

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see <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 (<a href="https://epa.ohio.gov/portals/47/facts/ohio\_wetlands.pdf">https://epa.ohio.gov/portals/47/facts/ohio\_wetlands.pdf</a>). 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>.

Sincerel	у,			
		?		
1				

Patrice Ashfield Field Office Supervisor

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

# This foregoing document was electronically filed with the Public Utilities Commission of Ohio Docketing Information System on

11/19/2024 4:06:08 PM

in

Case No(s). 24-1036-EL-BNR

Summary: Application Construction Notice for the Beacon-Darby 345 kV Tie Lines Adjustment Project. electronically filed by Hector Garcia-Santana on behalf of Ohio Power Company.