CONSTRUCTION NOTICE

For the

BATH SUBSTATION EXPANSION PROJECT

PUCO Case No. 19-1345-EL-BNR



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

Submitted by: The Dayton Power and Light Company 1900 Dryden Road Moraine, Ohio 45439

September 10, 2019

4906-06-05: APPLICATION REQUIREMENTS

The Dayton Power and Light Company (DP&L) provides the following information to the Ohio Power Siting Board (OPSB) pursuant to Ohio Administrative Code (OAC) Section 4906-06-05.

4906-06-05: GENERAL INFORMATION

4906-06-05(B)(1): PROJECT NAME AND DESCRIPTION

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

DP&L proposes the Bath Substation Expansion Project (Project), located at 2801 Linebaugh Road in Xenia, Greene County, Ohio (Attachment A, Figure 1). The purpose of this Project is to install a second 345/138 kilovolt (kV) transformer at Bath Substation.

The existing substation footprint is approximately 386,696 sq. ft (8.88 acres). The Project proposes to expand the substation to the north encompassing an area of 65 linear feet by 548 linear feet. The final footprint of the Bath Substation after the expansion will be approximately 422,316 sq. ft (9.70 acres); thus, expanding the substation by approximately 8.45%. The existing Bath Substation and proposed expansion area are located on property owned by DP&L.

The general coordinates of the proposed Project are latitude 39 46'02.13" N and longitude 83 58'42.39" W.

The Project meets the requirements for a Construction Notice (CN) because it is within the types of project defined by Item (4)(a) of Appendix A (Application Requirement Matrix for Electric Power Transmission Lines) of OAC Rule 4906-1-01, which states:

(4) Constructing additions to existing electric power transmission stations or converting distribution stations to transmission stations where:

(a) There is a twenty percent or less expansion of the fenced area.

The proposed Project is within the requirements of Item (4)(a) as the expanded fenced area will not increase by more than 20%.

The Project has been assigned PUCO Case No. 19-1345-EL-BNR.

4906-06-05 (B)(2): NEED FOR THE PROJECT

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

The OAC 4906-06-05 (B)(2) only applies to electric power, gas, and natural gas transmission lines and is not applicable to this substation expansion Project. However, the Project is being constructed as a baseline upgrade required to resolve a North American Electric Reliability Corporation (NERC) reliability criterion violation related to an overload of the Greene 345/138 kV transformer #1 for the loss of the Greene Substation 345/138 kV transformer #2 and the existing Bath Substation 345/138 kV transformer. Additionally, this Project will help provide sufficient operating capacity, operational flexibility, and reliability to the metro Dayton load center which provides service to some of Dayton's largest customers. The Project has been approved by PJM (PJM Baseline # b1273) and is a mandated Regional Transmission Expansion Plan (RTEP) Project. The Project is included in Section (D) "The Planned Transmission System" Form FE-T10 of the 2019 The Dayton Power and Light Company Long Term Forecast Report (LTFR) 2019.

4906-06-05 (B)(3): PROJECT LOCATION

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

The location of the Project is shown on Figure 1 in Attachment A. This figure shows the approximate Project area, existing substation, proposed fence expansion area, and existing transmission lines within the general Project vicinity.

4906-06-05 (B)(4): ALTERNATIVES CONSIDERED

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

There were no other alternatives considered for this Project. Based on the scope of the Project, the minimal change to the existing station fence, and the location of the Project on existing DP&L property, it was not reasonable to study other alternatives. The resulting fence change represents the

most suitable and least-impactful alternative. Socioeconomic, land use, and ecological information is presented in Section 4906-06-05 B(10) of this application.

4906-06-05 (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 entire construction of the substation expansion will be on the existing DP&L property. Therefore, there are no affected property owners that DP&L is required to inform. DP&L maintains a website (https://www.dpandl.com/About-DPL/Reliability/Transmission-Improvements/), which provides the public information about the Project and how to request a copy of the CN. A copy of the CN will be served on the chief executive officer of the county and township, and the head of pertinent public agencies with the duty of protecting the environment or of planning land use in the area where the Project is located. A copy of the CN will also be served to the public library in each political subdivision affected by this proposed Project as set forth in section 4906-06-07 below.

4906-06-05 (B)(6): CONSTRUCTION SCHEDULE

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

Construction for this Project is expected to begin June 1, 2020 and be completed by June 1, 2021.

4906-06-05 (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.

Attachment A, Figure 1 depicts the location of the Project. To locate and view the Project area from Columbus, take Interstate-70 (I-70) West to I-675 South, then head south on I-675 for about 3.5 miles to OH-235. Turn left and head east-southeast onto OH-235 for approximately 3.0 miles. Turn right onto Dayton Yellow Springs Road and continue for approximately 0.6 miles, then turn left onto Linebaugh Road. Travel south on Linebaugh Road for approximately 1.4 miles and the Project area is located on the west side of Linebaugh Road, along the north side of the existing Bath substation.

4906-06-05 (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.

The Project is located on existing DP&L-owned property. No other property easements, options, or

land use agreements are necessary to construct the Project or operate the substation.

4906-06-05 (B)(9): TECHNICAL FEATURES

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

4906-06-05 (B)(9)(a): Operating Characteristics

The applicant shall provide operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The equipment and facilities to be installed within the Project area will include the following:

- 345/138 kV 450 MVA transformer
- One 345 kV circuit breaker
- Two 138 kV circuit breakers
- Substation bus expansion
- Substation fence expansion

The Project is located entirely on DP&L property; thus, land acquisition or new easements will not be required.

4906-06-05 (B)(9)(b): Electric 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 proposed expanded fenced area or proposed new equipment; therefore, no Electric and Magnetic Field calculations are required by this code provision. And as a result, no design alternatives were considered for the Project.

4906-06-05 (B)(9)(c): Estimated Costs

The estimated capital cost of the project.

The estimated capital cost for the Project is \$8,071,000.

4906-06-05 (B)(10): SOCIAL AND ECOLOGICAL IMPACTS

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

4906-06-05 (B)(10)(a): Land Uses

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

The Project is located within and adjacent to an existing substation and transmission line ROW within Beavercreek Township, Greene County, Ohio. Habitat within the Project area consists of maintained lawn, grassland habitat, and shrub habitat. No forested habitat and very few trees are located within the Project area, and no potential bat habitat trees were identified during the survey. Other land uses in the vicinity of the Project area include agricultural lands, grassland, shrub habitat, forest habitat, residential/commercial/industrial properties, transportation corridors, and other utility corridors. The Fairborn Cement Company is located adjacent to the northeast of the Project area. There are no known parks, churches, wildlife management areas, or nature preserve lands within 1,000 feet of the Project. Two wetlands were delineated within the Project area. The Project may impact approximately 0.18 acre of palustrine emergent wetland habitat. No other environmental or cultural resources are expected to be impacted as a result of this Project. Archaeological and cultural resources, as well as areas of ecological concern are further discussed in Sections 4906-06-05 (B)(10)(c) and 4906-06-05 (B)(10)(f) of this CN, respectively.

4906-06-05 (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 Project is located on land owned by DP&L, and it does not contain any agricultural lands, and there does not appear to be any agricultural lands located immediately adjacent to the Project area.

4906-06-05 (B)(10)(c): Archaeological or Cultural Resources

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

A review of the Ohio History Connection online GIS database was conducted on July 23, 2019 for the area within 1,000 feet of the Project. The review identified one previously conducted cultural resource

survey and five archaeological sites (Table 1; Attachment A, Figure 2). The previous survey was completed in 2002 for a potential mine expansion, which identified the five archaeological sites within the 1,000-foot Project buffer. The sites include two prehistoric artifact scatters, two historic-age artifact scatters, and one artifact scatter with both prehistoric and historic-age artifacts. None of the sites have been assessed for National Register of Historic Places (NRHP) eligibility.

Site Number	Cultural Affiliation	Site Type	NRHP Status
33GR1172	Prehistoric	Low-density lithic scatter	Undetermined
33GR1173	Prehistoric	Low-density lithic scatter	Undetermined
33GR1174	Prehistoric and Historic	Artifact scatter	Undetermined
33GR1175	Historic	Artifact scatter	Undetermined
33GR1191	Historic	Artifact scatter	Undetermined

Table 1: Previously Recorded Archaeological Sites within 1,000 Feet of the Project

Due to the Project being located on an existing substation parcel that appears to have been previously disturbed, it is anticipated that there will be no adverse impacts to archaeological or cultural resources.

4906-6-05 (B)(10)(d): Local, State, and Federal Requirements

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.

Due to the potential for the Project to disturb one or more acres of land, the Project may be required to obtain general permit coverage from the Ohio Environmental Protection Agency (OEPA) under the National Pollutant Discharge Elimination System (NPDES) program for storm water discharges from small and large construction projects. A wetland delineation was completed for the Project area and a wetland delineation report is provided in Attachment B. Prior to construction, a U.S. Army Corps of Engineers (USACE) Section 404 Nationwide Permit authorization may be required for potentially impacting 0.18 acre of a wetland. No other government agency requirements are known at the time of this filing.

4906-06-05 (B)(10)(e): Endangered, Threatened, and Rare Species Investigation

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 Dayton Power and Light Company

the findings of the investigation, and a copy of any document produced as a result of the investigation.

An Information for Planning and Consultation (IPaC) Official Species List was completed on July 13, 2019 on the United States Fish and Wildlife (USFWS) website https://ecos.fws.gov.ipac/. The Official Species List yielded five federally listed species, which included the Indiana bat (*Myotis sodalis*), clubshell mussel (*Pleurobema clava*), rayed bean mussel (*Villosa fabalis*), and snuffbox mussel (*Epioblasma triquetra*) as endangered, and the northern long-eared bat (*Myotis septentrionalis*) as threatened. According to the State-listed species for Greene County, obtained from the Ohio Department of Natural Resources (ODNR)-Division of Wildlife (DOW) (updated June 2016) the same five species were State-listed. The Indiana bat, rayed bean mussel, clubshell mussel and snuffbox mussel are listed as State-endangered, while the northern long-eared bat is a species of concern. In addition, the State list included the northern harrier (*Circus cyaneus*), plains clubtail dragonfly (*Gomphus externus*), and eastern massasauga (*Sistrurus catenatus catenatus*) as State-endangered and the tonguetied minnow (*Exoglossum laurae*) and black sandshell mussel (*Ligumia recta*) as State-threatened. The Project is within range of all ten species.

Habitat within the Project area consists of maintained lawn, grassland, scrub-shrub habitat, and emergent wetland habitat. No forested habitat and very few trees are located within the Project area, and no potential bat habitat trees were identified during the survey. No streams, lakes or ponds were delineated within the Project area. Due to the lack of potential bat habitat trees, streams, lakes or ponds identified within the Project area it is anticipated that none of the federal or state-listed bat, mussel, fish, and dragonfly species, or habitat will be impacted by the Project. Based on the location, type, and or size of the wetlands on-site, it is anticipated that the northern harrier and eastern massasauga will also not be impacted by the Project.

Project review request letters were submitted to both the ODNR-DOW and USFWS on August 5, 2019 (Attachment C). The USFWS provided a Project Concurrence (Attachment C) dated August 16, 2019. A response has not yet been provided by the ODNR. The USFWS recommends seasonal tree cutting for trees \geq 3 inches diameter at breast height between October 1 and March 31 to avoid adverse impacts to the bat species. If any tree clearing will be necessary for the Project, it is anticipated to occur within this acceptable tree clearing timeframe; therefore, the Project is not likely to adversely affect these bat species as concurred by the USFWS. There are no streams located within or adjacent

this Project; therefore, there will be no impacts associated with the clubshell mussel, snuffbox mussel, and rayed bean mussel.

4906-06-05 (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.

A wetland delineation was conducted on June 19, 2019, which identified two palustrine emergent (PEM) wetlands. Wetland 1 occupies 0.80-acre and is located in the western and central portions of the Project area. Wetland 2 occupies 0.01-acre and is located in the south-central portion of the Project area. Approximately 0.18 acre of potential wetland impacts (0.17 acre Wetland 1; 0.01 acre Wetland 2) could occur as a result of the Project. A copy of the wetland delineation report is included within Attachment B of this application and potential wetland location impacts are shown on Figure 3 in Attachment A. Best management practices will be utilized to protect the remaining wetland habitat. There are no Federal Emergency Management Agency (FEMA) designated floodplains, federal, state, or local parks, scenic rivers, wildlife management areas, etc. located within or adjacent to the Project area.

4906-06-05 (B)(10)(g): Other Information/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 DP&L's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

4906-06-07: DOCUMENTATION OF CONSTRUCTION NOTICE APPLICATION TRANSMITTAL AND AVAILABILITY FOR PUBLIC REVIEW

This Construction Notice is being provided concurrently with filing to the following elected officials and pertinent departments of Greene County and Beavercreek Township.

Greene County

Bob Glaser, County Commissioner 35 Greene Street Xenia, Ohio 45385 Richard Gould, CPA, County Commissioner 35 Greene Street Xenia, Ohio 45385

The Dayton Power and Light Company

Bath Substation Expansion Project

Thomas Koogler, County Commissioner 35 Greene Street Xenia, Ohio 45385

Stephanie Ann Golff, P.E., P.S. Greene County Engineer 615 Dayton-Xenia Road Xenia, Ohio 45385

Beavercreek Township

Tom Kretz, Township Trustee 8514 Orchard Lane, Suite C Beavercreek, Ohio 45434

Jeff Roberts, Township Trustee 8514 Orchard Lane, Suite C Beavercreek, Ohio 45434

Debborah L. Wallace, Township Trustee 8514 Orchard Lane, Suite C Beavercreek, Ohio 45434 Devon Shoemaker, Executive Director Greene County Regional Planning Comm. 615 Dayton-Xenia Road Xenia, Ohio 45385

Amanda McKay, District Administrator County Soil & Water Conservation District 1365 Burnett Drive Xenia, Ohio 45385

Christy Ahrens, Fiscal Officer 8514 Orchard Lane, Suite C Beavercreek, Ohio 45434

Laurie Brown, Zoning Inspector/ Code Enforcement Officer 8514 Orchard Lane, Suite C Beavercreek, Ohio 45434

A copy of this CN application was provided to the following libraries for public viewing:

Beavercreek Community Library 3618 Dayton-Xenia Road Beavercreek, Ohio45432

Fairborn Community Library 1 E Main St Fairborn, Ohio 45324

ATTACHMENT A - FIGURES







ATTACHMENT B - WETLAND DELINEATION REPORT





Wetland Delineation Investigation of the Bath Substation Expansion Project



The Dayton Power and Light Company

Project No. 116386



Wetland Delineation Investigation of the Bath Substation Expansion Project

prepared for

The Dayton Power and Light Company

Project No. 116386

August 2019

prepared by Brooke Harrison

Burns & McDonnell Engineering Company, Inc. Columbus, Ohio

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Appendix A – Figures

- Figure 2 NWI, NHD, and Topographic Map
- Figure 3 NRCS Soils & Aerial Map

Figure 4 – Location Map of Wetlands and Other Water Resources

Appendix B - Routine Wetland Determination Data Forms

- **Appendix C Site Photographs**
- Appendix D ORAM Summary Worksheet and Wetland Categorization Worksheet

LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
DP&L	The Dayton Power and Light Company
FEMA	Federal Emergency Management Agency
GPS	Geographic Positioning System
kV	kilovolt
NAIP	National Agriculture Imagery Program
NFHL	National Flood Hazard Layer
NRCS	Natural Resource Conservation Service
NWI	National Wetland Inventory
NWP	Nationwide Permit
OEPA	Ohio Environmental Protection Agency
ORAM	Ohio Rapid Assessment Method
PEM	Palustrine Emergent
SSURGO	Soil Survey Geographic
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

1.0 INTRODUCTION

This report describes the results of the wetland delineation survey of the Bath Substation Project (Project) being developed by The Dayton Power and Light Company (DP&L) in Greene County, Ohio. To accomplish the Project, DP&L is proposing to install a second new 345 / 138 kilovolt (kV) transformer at the Bath Substation in Greene County, Ohio.

1.1 Description of Project Area

The Project is located at 2801 Linebaugh Road in Xenia, Greene County, Ohio (Figure A-1, Appendix A). The Project area was comprised of an existing substation and transmission lines, maintained lawn, grassland and shrub habitat. The wetland delineation encompassed a total area of approximately 16 acres (Project area).

1.2 Objectives of the Investigation

The purpose of this assessment was to identify any wetlands or other waterbodies within the approximately 16-acre Project area that may be considered waters of the United States (WOTUS) and subject to regulation under the federal Clean Water Act by the U.S. Army Corps of Engineers (USACE) or the State of Ohio. Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) conducted the wetland delineation on June 19, 2019 to identify the location and extent of wetlands and waterbodies within the Project area.

2.0 METHODS

The following discussions summarize the methods used for the review of existing data and the wetland delineation.

2.1 Existing Data Review

Burns & McDonnell reviewed available background information for the Project area prior to conducting a site visit. This available background information included the 2016 U.S. Geological Survey (USGS) 7.5minute topographic map (Yellow Springs Quadrangle), U.S. Fish & Wildlife Service (USFWS) National Wetland Inventory (NWI) maps, Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL), U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) 2019 Soil Survey Geographic (SSURGO) digital data for Greene County, Ohio, and National Agriculture Imagery Program (NAIP) aerial photography (2016). Figures A-2 and A-3 in Appendix A show the data reviewed.

2.2 Wetland Delineation Field Survey

A Burns & McDonnell wetland scientist completed a wetland delineation of the Project area on June 19, 2019. The delineation was completed in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* (1987 Manual) and the 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region – Version 2.0* (Regional Supplement). Sample plots were established at multiple locations, and Wetland Determination Data Forms from the Regional Supplement were completed to characterize the Project area (Appendix B). Vegetation, soil conditions, and hydrologic indicators were recorded at each of these sample plots. Locations of sample plots and other identified features were surveyed using a sub-meter accurate Global Positioning System (GPS) unit. Photographs were taken onsite and are included in Appendix C.

Each delineated wetland was assigned a category using the Ohio Rapid Assessment Method (ORAM) for Wetland Categorization. According to Ohio Administrative Code, Category 1 wetlands have minimal habitat and minimal hydrological and recreational functions. These wetlands do not provide critical habitat for threatened or endangered species. Category 2 wetlands have moderate wildlife habitat or hydrological or recreational functions. Category 2 wetlands are dominated by native vegetation but generally do not contain threatened or endangered species habitat. Category 3 wetlands have superior habitat or hydrological or recreational functions. These wetlands often provide habitat for threatened or endangered species. The State of Ohio affords different levels of protection to wetlands based on wetland quality. The ORAM 10 Page Form for Wetland Categorization was completed for each delineated wetland, and a preliminary ORAM score for each wetland was determined. A copy of the ORAM Summary Worksheet and Wetland Categorization Worksheet for each delineated wetland is located in Appendix D.

3.0 RESULTS

The following sections describe the results of the existing data review and the completed wetland delineation (Figures A-2, A-3, A-4, Appendix A).

3.1 Existing Data Review

Existing background information was reviewed to familiarize Burns & McDonnell wetland personnel with the topography and potential locations of wetlands and other waterbodies. The USGS topographic map (Yellow Springs Quadrangle) indicates the Project area consists of generally flat land (Figure A-2). No wetlands or streams are depicted in the Project area on the NWI map (Figure A-2). According to the FEMA NFHL no floodplains or floodways are located within the Project area.

The NRCS SSURGO digital data indicates three soil map units are located within the Project area (Figure A-3 and listed below). This soil map units are Miamian silt loam, 2 to 6 percent slopes (MhB), Brookston silt clay loam, fine texture, 0 to 2 percent slopes (Bs), and Miamian-Eldean silt loams, 2 to 6 percent slopes, moderately eroded (MoB2). Both MhB and Bs soil types are listed on the hydric soils list for Greene County.

Aerial photography indicates the Project area consists of an existing substation with transmission lines, maintained lawn, grassland and shrub habitat (Figure A-4 in Appendix A) which is consistent with findings during the wetland delineation.

3.2 Wetland Delineation Field Survey

The land cover and delineated features within the Project area are discussed in detail below.

Vegetation. The Project area was comprised of an existing substation, upland maintained lawn, upland grassland habitat and upland shrub habitat. Typical species observed in the upland maintained lawn included Kentucky bluegrass (*Poa pratensis*), common dandelion (*Taraxacum officinale*), white clover (*Trifolium repens*) and English plantain (*Plantago lanceolata*). Dominant species observed in upland grassland habitat included Kentucky bluegrass, Canada goldenrod (*Solidago canadensis*) and gray dogwood (*Cornus racemosa*). Dominant species observed in the upland shrub habitat included Russian olive (*Elaeagnus umbellata*) and Kentucky bluegrass. Dominant species observed in the wetland are discussed below.

Soil. Typical soils within upland sample plots consisted of non hydric soils with a mixture of brown (10YR 3/2) and dark brown (10YR 3/3). Typical soils within wetland sample plots consisted of hydric

soils with a mixture of black (10YR 2/1), dark gray (10YR 4/1), and gray (10YR 5/1, 10YR 6/1) colors with redoximorphic features present, and loamy/clayey in texture.

Hydrology. The primary source of hydrology for the wetlands is precipitation. Observed indicators of wetland hydrology included surface water, high water table, saturation, sediment deposits, sparsely vegetated concave surface, drainage patterns, geomorphic position, and a positive FAC-neutral test.

3.2.1 Delineated Features: Wetlands

Two wetlands were identified during the wetland delineation.

Wetland 1 (W-1). W-1 is considered a palustrine emergent (PEM) wetland which occupies 0.81-acre within the Project area. Vegetation in this wetland was dominated by Short's sedge (*Carex shortiana*), field horsetail (*Equisetum arvense*), and Kentucky bluegrass. Hydric soil was indicated by the presence of a redox dark surface (F6). Both primary and secondary wetland hydrology indicators were met. This wetland received a preliminary ORAM score of 20.5 and met the requirements for ORAM Category 1.

Wetland 2 (W-2). W-2 is considered a PEM wetland and occupies 0.01-acre within the Project area. Vegetation in this wetland was dominated by narrowleaf cattail (*Typha angustifolia*), Short's sedge and fox sedge (*Carex vulpinoidea*). Hydric soil was indicated by the presence of a redox dark surface (F6). Both primary and secondary wetland hydrology indicators were met. This wetland received a preliminary ORAM score of 40 and met the requirements for ORAM Category 2.

4.0 SUMMARY

Burns & McDonnell conducted a wetland delineation of the Project area to identify wetlands and other potential WOTUS. No streams were recorded within the Project area, but two PEM wetlands were identified. The habitat in the Project area generally consists of a mixture of maintained lawn, upland grassland and upland shrub habitat. These wetlands appear to have a hydrological connection to probable waters of the U.S and are thereby assumed to be jurisdictional wetlands subject to USACE jurisdiction. USACE has regulatory authority over jurisdictional status of resources and this final determination would be made, if necessary, during a USACE jurisdictional determination site visit. If it is determined that resources cannot be avoided then impacts to waters of the U.S. and the state of Ohio would require a permit from the U.S. Army Corps of Engineers and/or the Ohio EPA.





CREATE AMAZING.



Burns & McDonnell Engineering Company, Inc. 530 West Spring Street, Suite 200 Columbus, OH 43215 **O** 614-453-7800 <u>www.burnsmcd.com</u>

APPENDIX A - FIGURES









Path: Z:\Clients\ENS\DPL\116386_OPSBFILING\Studies\Geospatia\\DataFiles\ArcDocs\DPL_Bath_Fig A-4_Delineated_Wetlands_Aerial_Map.mxd_mwing_8/5/2019 COPYRIGHT © 2019 BURNS & McDONNELL ENGINEERING COMPANY, INC.

APPENDIX B - ROUTINE WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bath Substation Project			City/Co	ounty:	Xenia/Gree	ne	Sa	mpling Date	6/19/2019
Applicant/Owner: <u>DP&L</u>	S			tate: <u>OH</u> Sampling Point: <u>SP-1</u>					
Investigator(s): Brooke Harrison				Section,	Township,	Range:	S11 T3E F	R7N	
Landform (hillslope, terrace, terrace, terra	ice		Loo	cal relief	(concave, c	convex, none):	concave	Slop	0 % pe (%):
Subregion (LRR): LRR M, MLRA 11	1D		Lat:	39.767	'349	Long:	-83.97761	9 Dat	um: NAD 83
Soil Map Unit Name: <u>Brookston silty c</u>	lay loam, f	ïne texture, () to 2 perce	nt slopes	s (Bs)		۹ Classificat	IWI ion: <u>N/A</u>	
Are climate/hydrologic conditions on the year?	site typica	l for this time	e of	🛛 Yes	🗌 No	(If no, e	xplain in Rem	arks)	
Vegetation	Soil	Hydrology		Are "Nor	rmal Circum	istances"	present?	🛛 Yes	🗌 No
Significantly Disturbed? Naturally Problematic?					(If neede	ed, explain	any answers	in Remarks)	
SUMMARY OF FINDINGS – Attach	site map	showing	sampling	point lo	ocations, t	ransect	s, importa	ant feature	es, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Is the Sampled Area within a Wetland	Yes ⊠ ⊠ ? ⊠	No 	Remarks: F	PEM Wet	tland 1				
VEGETATION – Use scientific nam	es of pla	nts							
'ree Stratum (Plot size: 30') 1.	<u>5'</u>)	Abso Co 	Jute % Do 0ver Sp %	minant eccies? 	Indicator Status 	Domin Number that ar Total N Specie Percer that ar Prevalue GBL s FACW FAC s FACU UPL s Colum Preva	ance Test V er of Domina e OBL, FAC Number of D es Across Al nt of Domina e OBL, FAC ence Index otal % Cove pecies species species species species species nn Totals: lence Index	Worksheet: ant Species CW, or FAC: Dominant II Strata: ant Species CW, or FAC: Worksheet er of: % _%	3 (A) $3 (B)$ $100% (A/B)$ $100% (A/B)$ $x 1 = 0$ $x 2 = 0$ $x 3 = 0$ $x 4 = 0$ $x 5 = 0$ $(A) 0 (B)$
5 6 7 8			%			Hydrog □ Rap ☑ Don □ Prev	ninance Tes valence Inde	Hydrophytic st is >50% ex is ≤3.0 ¹	Vegetation

SOIL

Profile Desc	ription: (Describe	e to the c	lepth n	eded to docun	nent the	indicator o	r confirm the	absence of indicators.)	
Depth	Matrix			R	edox Fea	atures			
(inches)	Color (moist)	%	C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 2/1	100					. <u> </u>	loamy clay	
4-10	10YR 2/1	90		10YR 4/2	10	<u> </u>	M	loamy clay	faint redox
10-13	10YR 5/1	90		10YR 4/4	10	<u> </u>	<u> </u>	loamy clay	distinct redox
13-20	10YR 6/1	80		10YR 4/6	10	C	M	loamy clay	prominent redox
				10YR 5/1	10		·		
							·		
¹ Type: C=Co	ncentration, D=De	² Location: PL=Pore Lining, M=Matrix							
Hydric Soil I	ndicators:							Indicators for Problemati	c Hydric Soils ³ :
Histosol (/	A1)			Sandy Gle	yed Matr	ix (S4)		Coast Prairie Redox (A1	16)
Histic Epi	pedon (A2)			Sandy Red	lox (S5)	、			10)
□ □ Black Hist	ic (A3)			Stripped M	atrix (S6)			o (F10)
	Sulfide (A4)				cky Mine	, eral (F1)			S (F 12)
□ Stratified	avers (A5)				ved Mat	rix (F2)			aue (IF IZ)
	(A10)				Antrix (E3	R)		U Other (Explain in Remarks	s)
	r (AIU) Polow Dark Surfaa	o (A11)				2) 2 (E6)			
		e (ATT)				e (F0)		³ Indiactors of hydrophytics	vagatation and
	k Sullace (A12)							wetland hydrology must b	e present, unless
	icky Mineral (ST)	2)			pressions	5(F8)		disturbed or problematic.	
	ky Peal of Peal (S.	5)						Undrie Ceil Dresent?	
Restrictive L	ayer (if present):		Dent	(in the set)				Hydric Soll Present?	
Type:		_	Deptr	(inches):				⊠ Yes ∐ No	
HYDROLOG	Y								
Wetland Hyd	Irology Indicators	:							
Primary Indic	ators (minimum of	one requ	ired; ch	eck all that apply	/)			Secondary Indicators (2	or more required)
Surface W	/ater (A1)			🗌 Water-Sta	ined Lea	ives (B9)		Surface Soil Cracks (B6)
High Wate	er Table (A2)			🗌 Aquatic Fa	auna (B1	3)		🛛 Drainage Patterns (B	10)
Saturation	ı (A3)			🗌 True Aqua	atic Plant	s (B14)		Dry-Season Water Ta	able (C2)
🗌 Water Ma	rks (B1)			🗌 Hydrogen	Sulfide (Odor (C1)		Crayfish Burrows (C8)
Sediment	Deposits (B2)			Oxidized I	Rhizosph	eres on Livir	ng Roots (C3)	Saturation Visible on	Aerial Imagery (C9)
Drift Depo	sits (B3)			Presence	of Redu	ced Iron (C4))	Stunted or Stressed F	Plants (D1)
Algal Mat or Crust (B4)								(D2)	
☐ Iron Depo	sits (B5)			Thin Muck	Surface	e (C7)	()	☐ ☐ FAC-Neutral Test (D5	5)
	/egetated Concave	e Surface	(B8)	Other (Exr	lain in Re	marks)			
			(20)		Daaa		d Data ()		
Field Observ	ations:	Yes	No	(inches)	inspec	ribe Recorde ctions, etc.), if	available:	i gauge, monitoring well, aerial p	hotos, previous
Surface Wate	er present?	\bowtie		1 inch					
Water Table	present?	\boxtimes		Surface					
Saturation Pr	esent?	\boxtimes		Surface					
(includes o	apillary fringe)		_						
Wetland Hyd	Irology Present?	\boxtimes							
Remarks:					- 1				

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bath Substation Project		City/County:	Xenia/Greer	ie	Sampling Date:	6/19/2019
Applicant/Owner: <u>DP&L</u>			Sta	ate: <u>OH</u>	Sampling P	oint: SP-2
Investigator(s): Brooke Harrison		Sectio	on, Township, I	Range: <u>S11</u>	T3E R7N	
Landform (hillslope, terrace, terrace etc.)		Local rel	ef (concave, c	onvex, none none):	Slop	0 % e (%):
Subregion (LRR): LRR M, MLRA 111D		Lat: 39.7	67420	Long: -83.9	977558 Datu	im: NAD 83
Soil Map Unit Name: <u>Brookston silty clay loam</u> Are climate/hydrologic conditions on the site typic year?	, fine texture, 0 t cal for this time o	to 2 percent slop of ⊠ Ye	bes (Bs) s □ No	Class (If no, explain i	NWI sification: <u>N/A</u> n Remarks)	
VegetationSoilSignificantly Disturbed? Naturally Problematic?	Hydrology	Are "۱	Normal Circum	stances" prese d, explain any ar	ent? 🛛 Yes nswers in Remarks)	🗌 No
SUMMARY OF FINDINGS – Attach site ma	p showing sa	mpling point	locations, t	ransects, im	portant feature	s, etc.
Ye Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Is the Sampled Area within a Wetland?	s No R 	Remarks: Upland	d grassland and	d shrub		
VEGETATION – Use scientific names of p	lants					
Tree Stratum (Plot size: <u>30'</u>) 1. 2. 3.	Absolu Cov 	Ite % Dominar er Species' %	ver FACU FACU FACU FACU FACU FACU FACU FACU	Dominance Number of D that are OBL Total Numbe Species Acro Percent of D that are OBL Prevalence I Total % OBL species FACW species FACU species Column Tota Prevalence Hydrophytic	Test Worksheet: Dominant Species ., FACW, or FAC: er of Dominant oss All Strata: Dominant Species ., FACW, or FAC: Index Worksheet: 6 Cover of: s 0% sies 0% s 0% als: 115% Index = B/A =	
5. Poa pratensis 6. 7. 8. 9. Woody Vine Stratum (Plot size: <u>30'</u>)		Yes %		Rapid Tes Dominanc Prevalence Morpholog data in Rei	st for Hydrophytic \ ce Test is >50% ce Index is ≤3.0 ¹ gical Adaptations ¹ marks or on a separa	/egetation (Provide supporting te sheet)
1. Parthenocissus quinquefolia 2		<u>% Yes</u> <u>%</u> % % = Total Co	FACU	Problema ¹ Indicators o must be pres	tic Hydrophytic Ve of hydric soil and w ent, unless disturb	getation ¹ (explain) etland hydrology ed or problematic

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

Hydrophytic Vegetation Present?
 Yes
 No

SOIL

Profile Descr	iption: (Describe f	to the dep	th needed to docu	ment the	indicator or	confirm the	absence of indicators.)			
Depth	Matrix		F	Redox Fea	itures					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Texture	Remarks			
0-3	10YR 3/2	100				silt loam				
3-8	10YR 3/3	90	10YR 3/2	10	С	Μ	silt loam			
8-16	10YR 3/3	75	10YR 3/2	15	С	M	silt loam			
			10YR 5/6	10	C	M				
<u> </u>										
¹ Type: C=Co	ncentration, D=Depl	etion, RM	Reduced Matrix, C	S=Covere	d or Coated	Sand Grains	² Location: PL=Pore Lini	ng, M=Matrix		
Hydric Soil Ir	ndicators:						Indicators for Problematic	Hydric Soils ³ :		
🗌 Histosol (A	(1)		🗌 Sandy Gl	eyed Matr	ix (S4)		Coast Prairie Redox (A16)			
Histic Epip	edon (A2)		🗌 Sandy Re	dox (S5)			☐ Dark Surface (S7)			
🗌 Black Histi	c (A3)		Stripped I	Matrix (S6)		☐ Iron-Manganese Masses (F12)			
Hydrogen	Sulfide (A4)		🗌 Loamy M	ucky Mine	ral (F1)		☐ Very Shallow Dark Surface (TF 12)			
Stratified L	ayers (A5)		🗌 Loamy Gl	eyed Matr	ix (F2)		Other (Explain in Remarks)			
2 cm Muck	(A10)		Depleted	Matrix (F3	5)					
Depleted E	Below Dark Surface	(A11)	Redox Da	rk Surface	, e (F6)					
☐ . ☐ Thick Dark	Surface (A12)	· · ·	Depleted	Dark Surfa	ace (F7)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless			
 ☐ Sandv Mu	ckv Mineral (S1)		☐ Redox De	pressions	(F8)					
☐ 5 cm Mucky Peat or Peat (S3)										
Restrictive Layer (if present): Hydric Soil Present?										
Type: ro	cky/compaction		🗌 Yes 🖾 No							
Remarks: No	hydric soil indicators	s present.					1			
1	-									

HYDROLOGY

Wetland Hydrology Indicators:								
Primary Indicators (minimum of c	one requ		Secondary Indicators (2 or more required)					
Surface Water (A1)			🗌 Water-Stain	ied Leaves (B9)	Surface Soil Cracks (B6)			
☐ High Water Table (A2)			🗌 Aquatic Fau	ına (B13)	Drainage Patterns (B10)			
Saturation (A3)			🗌 True Aquati	c Plants (B14)	Dry-Season Water Table (C2)			
🗌 Water Marks (B1)			🗌 Hydrogen S	Sulfide Odor (C1)	Crayfish Burrows (C8)			
Sediment Deposits (B2)			Oxidized Rh	nizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3)			Presence of	f Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)			Recent Iron	Reduction in Tilled Soils (C6)	Geomorphic Position (D2)			
Iron Deposits (B5)			Thin Muck S	Surface (C7)	☐ FAC-Neutral Test (D5)			
Inundation Visible on Aerial Ir	magery (B7)	☐ Gauge or W	/ell Data (D9)				
Sparsely Vegetated Concave	Surface	(B8)	Other (Expla	in in Remarks)				
Field Observations:	Yes	No	Depth (inches)	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, etc.), if available:				
Surface Water present?		\boxtimes						
Water Table present?		\boxtimes						
Saturation Present?		\boxtimes						
(includes capillary fringe)								
Wetland Hydrology Present? 🔲 🖂								
Remarks: No hydrology indicato	rs prese	nt.						
WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bath Substation Project	City/County: Xenia/Green	e Sampling Date: 6/19/2019
Applicant/Owner: DP&L	Sta	ate: OH Sampling Point: SP-3
Investigator(s): Brooke Harrison	Section, Township, F	Range: S11 T3E R7N
Landform (hillslope, terrace, vegetated swale	Local relief (concave, co	onvex, concave 0 % none): Slope (%):
Subregion (LRR): LRR M, MLRA 111D	Lat: <u>39.767592</u>	Long: <u>-83.979495</u> Datum: <u>NAD 83</u>
Soil Map Unit Name: <u>Miamian silt loam, 2 to 6 perce</u>	ent slopes (MhB)	NWI Classification: <u>N/A</u>
Are climate/hydrologic conditions on the site typical fo year?	r this time of 🛛 🛛 Yes 🗌 No	(If no, explain in Remarks)
Vegetation Soil Hy	/drology Are "Normal Circums	stances" present? 🛛 Yes 🗌 No
Significantly Disturbed? □ Naturally Problematic? □	□ □ (If needed	d, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map sh	lowing sampling point locations, tr	ansects, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? X Wetland Hydrology Present? X Is the Sampled Area within a Wetland? X	No Remarks: PEM Wetland 2	
VEGETATION – Use scientific names of plants	6	
Free Stratum (Plot size: <u>30'</u>)	Absolute % Dominant Indicator Cover Species? Status	Dominance Test Worksheet:
12	<u>%</u>	Number of Dominant Species that are OBL, FACW, or FAC:2 (A)
3	<u>%</u> <u> </u>	Total Number of Dominant Species Across All Strata: 2 (B)
5	<u>%</u> <u>0 %</u> = Total Cover	Percent of Dominant Species that are OBL_EACW_or_EAC100% (A/B)
Sapling/Shrub Stratum (Plot size: <u>15'</u>)		Drevelance Index Worksheet:
1	<u> % </u>	Prevalence index worksneet.
2	<u>%</u> <u> </u>	Total % Cover of: Multiply by:
3		OBL species% x 1 =0
4		FACW species% x 2 =0
5	<u>%</u>	FAC species% x 3 =0
	<u> 0 %</u> = Total Cover	FACU species% x 4 =
Herb Stratum (Plot size: <u>5'</u>)		UPL species% x 5 =
1. Typha angustifolia	<u>15 % No OBL</u>	Column Totals: <u>0</u> % (A) <u>0</u> (B)
2. <u>Scirpus atrovirens</u>	<u>15 % No OBL</u>	Prevalence Index = B/A =
3. <u>Carex lurida</u>	<u>10 % No OBL</u>	
4. Equisetum arvense	<u>5 % No FAC</u>	Hydrophytic Vegetation Indicators:
5. <u>Carex shortiana</u>	25 % Yes FACW	
6. <u>Carex vupinoidea</u>	20 % Yes FACW	Rapid Test for Hydrophytic Vegetation
7	%	⊠ Dominance Test is >50%
8	<u>%</u>	\square Prevalence Index is <3.0 ¹
9	<u>%</u> <u>90 %</u> = Total Cover	Morphological Adaptations ¹ (Provide supporting
Woody Vine Stratum (Plot size: <u>30'</u>)		cata in Remarks or on a separate sheet)
1	<u>%</u>	Problematic Hydrophytic Vegetation' (explain)
2	<u>%</u>	¹ Indicators of hydric soil and wetland hydrology
3	<u>%</u>	must be present, unless disturbed or problematic
	<u> 0 %</u> = Total Cover	Hydrophytic Vegetation Present? 🛛 Yes 📋 No

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

Profile Desc	ription: (Describe	to the de	epth ne	eded to docum	nent the	indicator o	r confirm the a	absence of indicators.)	
Depth	Matrix			Re	edox Fea	atures			
(inches)	Color (moist)	%	С	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 4/1	90		10YR 2/1	10	С	Μ	loamy clay	faint redox
3-12	10YR 2/1	70		10YR 3/1	20	С	Μ	loamy clay	faint redox
	·			10YR 5/6	10	C	M		prominent redox
12-20	10YR 2/1	60		10YR 3/1	25	<u> </u>	M	loamy clay	faint redox
	·			10YR 5/6	15	C	M		preminent redox
	·			· -					
	·			· ·					
¹ Type: C=Co	oncentration, D=De	pletion, RI	/I=Red	uced Matrix, CS	=Covere	ed or Coated	Sand Grains	² Location: PL=Pore L	ining, M=Matrix
Hydric Soil	ndicators:							Indicators for Problemat	ic Hydric Soils ³ :
Histosol (A1)			☐ Sandv Glev	ved Matr	ix (S4)		Coost Proirie Podov (A	16)
	pedon (A2)			□ Sandy Red	ox (S5)	()			10)
Black His	tic (A3)			Stripped M	atrix (S6	3)			(540)
	Sulfide (A4)				sky Mine	, eral (F1)			es (F1Z)
	Lavers (A5)				ved Mat	riv (F2)			ace (1F-12)
	Layers (70)				Jotriv (E?	R)		U Other (Explain in Remark	s)
	Rolow Dark Surface	~ (\ 1 1)				2) 2 (E6)			
		e (ATT)				e (FU)		³ Indicators of hydrophytic	vogotation and
	K Sufface (ATZ)							wetland hydrology must b	pe present, unless
	icky Mineral (ST)	2)			ressions	5(F8)		disturbed or problematic.	
	ky Pear of Pear (53)							
Restrictive I	_ayer (if present):							Hydric Soil Present?	
Туре:		_	Depth	(inches):				🛛 Yes 📋 No	
Remarks:									
HYDROLOG	Y								
Wetland Hyd	drology Indicators	:							
Primary Indic	ators (minimum of	one requir	ed; che	eck all that apply	()			Secondary Indicators (2	or more required)
Surface V	Vater (A1)			🗌 Water-Sta	ined Lea	aves (B9)		Surface Soil Cracks	(B6)
High Wat	er Table (A2)			🗌 Aquatic Fa	auna (B1	3)		🛛 Drainage Patterns (B	310)
Saturation	n (A3)			🗌 True Aqua	itic Plant	s (B14)		Dry-Season Water T	able (C2)
🗌 Water Ma	irks (B1)			Hydrogen	Sulfide (Odor (C1)		Crayfish Burrows (C8	3)
Sediment	Deposits (B2)			Oxidized F	Rhizosph	eres on Livir	ng Roots (C3)	Saturation Visible on	Aerial Imagery (C9)
Drift Depo	osits (B3)			Presence	of Reduo	ced Iron (C4))	Stunted or Stressed	Plants (D1)
Algal Mat	or Crust (B4)			□ □ Recent Iro	n Reduc	tion in Tilled	, Soils (C6)	Geomorphic Position	(D2)
	sits (B5)				Surface	e (C7)	()	K FAC-Neutral Test (D	5)
	n Visible on Aerial I	magery (B	7)		Well Dat	a (D9)			0)
	Vegetated Concave	Surface I	(B8)		lain in Re	marke)			
		Canado	20)	Denth					
Field Obser	vations:	Yes	No	(inches)	inspec	ribe Recorde ctions, etc.), if	ed Data (stream available:	gauge, monitoring well, aerial p	photos, previous
Surface Wate	er present?	\boxtimes		4 inches					
Water Table	present?	\boxtimes		surface					
Saturation P	resent?	\boxtimes		surface					
(includes of	capillary fringe)								
Wetland Hy	drology Present?	\boxtimes							
Remarks:			_		_	-			
1									

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bath Substation Project	City/County: Xenia/Green	e Sampling Date: <u>6/19/2019</u>
Applicant/Owner: DP&L	Sta	ate: OH Sampling Point: SP-4
Investigator(s): Brooke Harrison	Section, Township, F	Range: S11 T3E R7N
Landform (hillslope, terrace, hillslope etc.)	Local relief (concave, co	onvex, none 0 % none): Slope (%):
Subregion (LRR):LRR M, MLRA 111D	Lat: <u>39.889629</u>	Long:83.051767 Datum: _NAD 83
Soil Map Unit Name: <u>Miamian silt loam, 2 to 6 percent s</u>	slopes (MhB)	NWI Classification: <u>N/A</u>
Are climate/hydrologic conditions on the site typical for this year?	is time of 🛛 Yes 🗌 No	(If no, explain in Remarks)
Vegetation Soil Hydrol Significantly Disturbed?	ology Are "Normal Circums	stances" present? 🛛 Yes 🗌 No
Naturally Problematic?] (If needed	d, explain any answers in Remarks)
SUMMARY OF FINDINGS – Attach site map show	ving sampling point locations, tr	ansects, important features, etc.
Yes No Hydrophytic Vegetation Present? Image: Comparison of the sent? Hydric Soil Present? Image: Comparison of the sent? Wetland Hydrology Present? Image: Comparison of the sent? Is the Sampled Area within a Wetland? Image: Comparison of the sent?	o Remarks: Upland shrub	
VEGETATION – Use scientific names of plants		
Tree Stratum (Plot size: <u>30'</u>) 1.	Absolute % Dominant Species? Indicator Status %	Dominance Test Worksheet:Number of Dominant Species that are OBL, FACW, or FAC:1 (A)Total Number of Dominant Species Across All Strata:2 (B)Percent of Dominant Species that are OBL, FACW, or FAC: 50% (A/B)Prevalence Index Worksheet: 50% (A/B)OBL species0%X 1 =0FACW species0%X 2 =0FAC species76%X 3 =228FACU species20%X 4 =80UPL species10%X 5 =50Column Totals:106%Index 4 =3.38
4. <u>Achillea millefolium</u>	<u>6 % No FACU</u>	Hydrophytic Vegetation Indicators:
6. Solidado canadensis	2 % No FACU	Rapid Test for Hydrophytic Vegetation
7. Rubus occidentalis	10 % No UPL	Dominance Test is >50%
8. Equisetum arvense	2 % No FAC	$\Box \text{ Brayalance Index is } < 2.01$
9	<u>%</u>	$\square \text{ Morphological Adaptations}^1 (Provide supporting)$
Woody Vine Stratum (Plot size: <u>30'</u>) 1. <u>Vitis aestivalis</u>	<u>100 %</u> = Total Cover <u>10 %</u> <u>Yes</u> <u>FACU</u>	 ☐ Problematic Hydrophytic Vegetation¹ (explain)
2	<u>%</u>	¹ Indicators of hydric soil and wetland hydrology
э	<u>10 %</u> = Total Cover	
		Hydrophytic vegetation Present? [] Yes [X] No

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

Profile Desc	ription: (Describe	to the de	pth ne	eded to docu	ment the	indicator o	r confirm the a	absence of indicators.)	
Depth	Matrix			F	Redox Fea	atures			
(inches)	Color (moist)	%	Co	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 3/2	100						silt loam	
3-12	10YR 3/3	75		10YR 3/2	20	С	M	silt loam	
				10YR 5/6	5	C	M	silt loam	
12-17	10YR 3/3	60		10YR 3/2	25	<u> </u>	<u> </u>	silt loam	
·	·			10YR 5/6	15	<u> </u>	IVI	silt loam	
·	<u></u>								
¹ Type: C=Co	oncentration, D=De	pletion, RM	/I=Redu	uced Matrix, C	S=Covere	ed or Coated	Sand Grains	² Location: PL=Pore Lini	ng, M=Matrix
Hydric Soil	Indicators:							Indicators for Problematic	Hydric Soils ³ :
Histosol (A1)			☐ Sandv Gle	eved Matr	ix (S4)		Coast Brairia Baday (A16	١
Histic Epi	pedon (A2)			☐ Sandy Re	dox (S5)	())
Black His	tic (A3)				Matrix (S6)			(E40)
	Sulfide (A4)				ucky Mine	, eral (F1)			(F12)
	Lavers (A5)				eved Mat	rix (F2)		Very Shallow Dark Surface	e (TF 12)
	Layers(A3)				Motrix (E3	(1 2)		Other (Explain in Remarks)	
	R (AIU) Rolow Dark Surfaa	~ (\ 1 1)			IVIALITX (FC	0) 0 (E6)			
		e (ATT)				e (F0)		³ Indicators of hydrophytic vo	actation and
	k Sullace (A12)				Dark Sun			wetland hydrology must be	present. unless
	ucky Mineral (S1)				pressions	S (F8)		disturbed or problematic.	
	cky Peat or Peat (Sc	3)					ſ		
Restrictive I	Layer (if present):							Hydric Soil Present?	
Type: re	ock/compaction		Depth	(inches): 17	'+ inches			🗌 Yes 🖾 No	
Remarks:									
ritemarke.									
HYDROLOG	ïΥ								
Wetland Hyd	drology Indicators	:							
Primary Indic	cators (minimum of	one requir	ed; che	eck all that app	ly)			Secondary Indicators (2 or	more required)
Surface V	Vater (A1)			□ Water-St	ained Lea	ives (B9)		Surface Soil Cracks (B	6)
☐ High Wat	er Table (A2)			Aquatic F	auna (B1	3)		Drainage Patterns (B10)))
	n (A3)				atic Plant	s (B14)		Drv-Season Water Tab	// le (C2)
□ Water Ma	(R1)				n Sulfide (Odor(C1)		\Box Cravfish Burrows (C8)	10 (02)
	Deposits (B2)				Rhizosph	eres on Livi	na Roots (C3)	\square Saturation Visible on A	erial Imagery (C9)
	(B2)				of Redu	red Iron (C/)			ante (D1)
	Cruct (P4)) Saila (CG)		
	or Crust (D4)						1 30lis (C0)		52)
	n Vicible on Articl II	magar : /P	7)					□ FAC-ineutral Test (D5)	
	n visible on Aerial I	magery (B	() (D0)		r weii Dat	a (D9)			
	vegetated Concave	e Surface (88)		plain in Re	marks)			
Field Obser	vations:	Yes	No	Depth (inches)	Desc inspec	ribe Recorde ctions, etc.), if	ed Data (stream available:	gauge, monitoring well, aerial pho	otos, previous
Surface Wate	er present?		\boxtimes			,.			
Water Table	present?		\square						
Saturation P	resent?								
(includes of	capillary fringe)								
Wetland Hv	drology Present?								
Domortice	arology i resent:								
Remarks:									
1									

APPENDIX C - SITE PHOTOGRAPHS



Photo 1: View of Sample Plot 1 (SP-1) in PEM Wetland 1 (W-1), facing north.



Photo 3: View of SP-3 in PEM W-2, facing northeast.



Photo 2: View of SP-2 in upland grassland and shrub habitat, facing southwest.



Photo 4: View of SP-4 in upland shrub habitat, facing northwest.

Bath Substation Expansion Project Wetland Delineation and Habitat Assessment Burns & McDonnell Project No. 116386

> BURNS MGDONNELL.

Photograph Log June 19, 2019



Photo 5: View of PEM habitat in W-1, facing north.





Photograph Log June 19, 2019



Photo 6: View of PEM habitat in W-2, facing west.



Photo 8: Facing west, view of typical upland shrub habitat located throughout the Project area.

Wetland Delineation and Habitat Assessment Burns & McDonnell Project No. 116386 **Bath Substation Expansion Project**



Photo 9: Facing south, view of typical upland grassland and shrub habitat located throughout the Project area.

Bath Substation Expansion Project Wetland Delineation and Habitat Assessment Burns & McDonnell Project No. 116386

Photograph Log June 19, 2019 APPENDIX D -ORAM SUMMARY WORKSHEET AND WETLAND CATEGORIZATION WORKSHEET

Background Information

Name: Brooke Harrison

Date: 6/19/2019

Affiliation: Burns and McDonnell

Address: 530 West Spring Street, Columbus, Ohio 43215

Phone Number: 614-453-7833

e-mail address: bharrison@burnsmcd.com

Name of Wetland: W-1

Vegetation Communit(ies): PEM

HGM Class(es): depressional

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

Please refer to site map for wetland location.

Yellow Springs
Greene
05090202
06/19/2019
Х
Х
Х

Name of Wetland: W-1		
Wetland Size (acres, hectares): 0.01 AC		
Sketch: Include north arrow, relationship with other surface waters, vegetation	n zones, etc.	
Please refer to site map for wetland location.		
Commonte Narrativo Discussion Justification of Catogory Changes		
comments, Narrative Discussion, Sustincation of Category Changes.		
Final score : 20.5	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.	х	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	х	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	Х	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	х	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		Х
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		Х

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

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. 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	YES	\bigcirc
	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 Obio, the Indiana Bat has	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	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	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	
		Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	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)	YES	
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows 2) supports acidophilic masses	YES	\mathbb{N}
	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 $<25\%2$	Wetland is a Category 3 wetland	Go to Question 7
		Go to Question 7	
<u>7</u>	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	\mathbb{N}
	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	
ъа	forest characterized by, but not limited to, the following characteristics:	YES	
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence	Wetland is a Category 3 wetland.	Go to Question 8b
	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?	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	
	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
	be the wetland is hydrologically diffestive (the lakeward of 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 vecetation.	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 9e
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	
	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
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.)	Wetland should be evaluated for possible Category 3 status	Complete Quantitative Rating
		Rating	

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	~ 1	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	5 00		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Sito		Rath Substation Project	Brooke Harrison	Date: 06/19/19
Sile.	DFQLI		DIOOKE Hallison	Date: 00/19/19
0	0	Metric 1 Wetland Are	ea (size)	
max 6 pts.	subtotal	Select one size class and assign so	core.	
		>50 acres (>20.2ha) (6 pts)		
		25 to <50 acres (10.1 to <20	.2ha) (5 pts)	
		10 to <25 acres (4 to <10.1 h	na) (4 pts)	
		3 to <10 acres (1.2 to <4 ha)	(3 pts)	
		0.3 to < 3 acres (0.12 to < 1.2)	na) (2 pts) 12ha) (1 nt)	
		x <0.1 acres (0.04ha) (0 pts)		
_				
7	7	Metric 2. Upland buffe	ers and surrounding la	and use.
max 14 pts.	subtotal	2a. Calculate average buffer width. Sele	ect only one and assign score. Do not d	Jouble check.
		WIDE. Buffers average 50m	1 (164 ft) or more around wetland perime	eter (/)
		NABBOW Buffers average	10m to < 25m (32ft to < 82ft) around weta	tland perimeter (1)
		VERY NARROW. Buffers av	verage <10m (<32ft) around wetland per	rimeter (0)
		2b. Intensity of surrounding land use. S	elect one or double check and average.	
		VERY LOW. 2nd growth or	older forest, prairie, savannah, wildlife a	rea, etc. (7)
		X LOW. Old field (>10 years),	shrubland, young second growth forest.	. (5)
		MODERATELY HIGH. Resu	dential, fenced pasture, park, conservation	ion tillage, new fallow field. (3)
			pastale, fow cropping, mining, constr	
6	13	Metric 3. Hydrology.		
max 30 pts.	subtotal	3a. Sources of Water. Score all that app	ply.	3b. Connectivity. Score all that apply.
		High pH groundwater (5)		100 year floodplain (1)
		Other groundwater (3)		Between stream/lake and other human use (1)
		Seasonal/Intermittent surface	e water (3)	Part of riparian or upland corridor (1)
		Perennial surface water (lake	e or stream (5)	3d. Duration inundation/saturation. Score one or dbl check.
		3c. Maximum water depth. Select only of	one and assign score.	Semi- to permanently inundated/saturated (4)
		>0.7 (27.6in) (3)		Regularly inundated/saturated (3)
		0.4 to 0.7m (15.7 to 27.6in) (2)	X Seasonally inundated (2)
		3e. Modifications to natural hydrologic re	gime. Score one or double check and a	average.
		None or none apparent (12)	Check all disturbances observed	
		Recovered (7)	ditch	point source (nonstormwater)
		X Recovering (3)	tile	filling/grading
		X Recent of no recovery (1)	dike	dredging
			stormwater input	x Other-tire rut wetland located within and and aid. To
				an access road
5 5	10 5		motion and Dovelanm	
C.C	IO.3	JNIETRIC 4. Habitat Alter	r dauble aback and average	ient.
111ax 20 pts.	Subiolai	None or none apparent (4)	touble check and average.	
		Recovered (3)		
		χ Recovering (2)		
		X Recent or no recovery (1)		
		4b. Habitat development. Select only or	ne and assign score.	
		Very good (6)		
		Good (5)		
		Moderately good (4)		
		Fair (3)		
		χ Poor to fair (2)		
		Poor (1)	his shash and success	



ite:	DP&L	Bath Substation Project	Brooke Harrison	Date: 06/19/19
		1		
	18.5			
SI	ubtotal first pag			
0	18.5	Metric 5. Special Wetla	inds.	
10 pts.	subtotal	Check all that apply and score as indicate	ed.	
		Bog (10)		
		Fen (10)		
		Old growth forest (10)		
		Mature forested wetland (5)		
		Lake Erie coastal/tributary we	tland -unrestricted hydrology (10)	
		Lake Erie coastal/tributary we	tland-restricted hydrology (5)	
		Lake Plain Sand Prairies (Oal	<pre></pre>	
		Relict Wet Prairies (10)		
		Known occurrence state/fede	ral threatened or endangered species	(10)
		Significant migratory songbird	/water fowl habitat or usage (10)	
		Category 1 Wetland. See Qu	estion 1 Qualitative Rating (-10)	
0	20 F	Metric 6 Plant commu	nities interspersion	microtopography
Z	2U.3	6a. Wetland Vegetation Communities	Vegatation Community C	over Scale
c Lo pto.	oubtota	Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
		Aquatic bed		Present and either comprises small part of wetland's vegetative
		1 Emergent	1	and is of moderate quality, or comprises a significant part but of low quality
		Shrub		Present and either comprises significant part of wetland's
		Forest	2	vegetation and is of moderate quality, or comprises a small p and is of high quality.
		Mudflats		Present and comprises significant part, or more, of wetland's
		Open Water	3	vegetation and is of high quality.
		Other		
		6b. Horizontal (plan view) Interspersion.	Narrative Description of	Vegetation Quality
		Score only one.	low	Low spp diversity and/or predominance of nonnative or
		High (5)		disturbance tolerant native species
		Moderately high (4)	mod	Native spp are dominant component of the vegetation, althout nonnative and/or disturbance tolerant native spp can also be
		Moderate (3)		present, and species diversity moderate to moderately high, b
		Moderately low (2)		generally w/o presence of rare, threatened, or endangered sp
		Low (1)	high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and
		X None (0)		high spp diversity and often, but not always, the presence of i
		6c. Coverage of invasive plants. Refer to) Mudflet and Onen Weter	threatened, or endangered spp
		deduct points for coverage.		Absent <0.1ha (0.247 acres)
		Extensive >75% cover (-5)	1	Low 0.1 to <1ha (0.247 to 2.47 acres)
		Moderate 25-75% cover (-3)	2	Moderate 1 to $<$ 4ha (2.47 to 9.88 acres)
		Sparse 5-25% cover (-1)	3	High 4ha (9.88 acres) or more
		Nearly absent <5% cover (0)	Microtopography Cover 9	Scale
		X Absent (1)	0	Absent
		6d. Microtopography.		Present in very small amounts or if more common of margina
		Score all present using 0 to 3 scale.	1	quality
		0 Vegetated hummucks/tussuc	ks o	Present in moderate amounts. but not of highest quality or in
		0 Vegetated hummucks/tussuc 0 Coarse woody debris >15cm	ks 2 (6in)	Present in moderate amounts, but not of highest quality or in small amounts of highest quality

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

0

Amphibian breeding pools

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

Present in moderate or greater amounts and of highest quality

ORAM	Summary	/ Worksheet
------	---------	-------------

		circle	
		answer or	
		insert	Result
		score	
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	7	
	Metric 3. Hydrology	6	
	Metric 4. Habitat	5.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE	20.5	Category based on score breakpoints Cat. 1

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

Date: 6/19/2019

Affiliation: Burns and McDonnell

Address: 530 West Spring Street, Columbus, Ohio 43215

Phone Number: 614-453-7833

e-mail address: bharrison@burnsmcd.com

Name of Wetland: W-2

Vegetation Communit(ies): PEM

HGM Class(es): depressional

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

Please refer to site map for wetland location.

Lat/Long or UTM Coordinate	
USGS Quad Name	Yellow Springs
County	Greene
Township	
Section and Subsection	
Hydrologic Unit Code	05090202
Site Visit	06/19/2019
National Wetland Inventory Map	Х
Ohio Wetland Inventory Map	
Soil Survey	Х
Delineation report/map	Х

Name of Wetland: W-2	
Wetland Size (acres, hectares): 0.81 AC onsite	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Please refer to site map for wetland location.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 40Category:	Mod. Cat. 2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <u>http://www.dnr.state.oh.us/dnap</u>. 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	YES	\bigcirc
	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 Obio, the Indiana Bat has	Wetland should be evaluated for possible Category 3 status	Go to Question 2
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	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	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category 3 wetland.	Go to Question 3
		Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES	
		Wetland is a Category 3 wetland	Go to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	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)	YES	
	vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	Wetland is a Category 1 wetland	Go to Question 6
	2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows 2) supports acidophilic masses	YES	\mathbb{N}
	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 $<25\%2$	Wetland is a Category 3 wetland	Go to Question 7
		Go to Question 7	
<u>7</u>	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free	YES	\mathbb{N}
	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	
ъа	forest characterized by, but not limited to, the following characteristics:	YES	
	overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence	Wetland is a Category 3 wetland.	Go to Question 8b
	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?	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	
	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
	be the wetland is hydrologically diffestive (the lakeward of 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 vecetation.	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 9e
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be evaluated for possible Category 3 status	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	
	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
	were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.)	Wetland should be evaluated for possible Category 3 status	Complete Quantitative Rating
		Rating	

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	~ 1	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	5 00		
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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

Site:	DP&L I	Bath Substation Project	Brooke Harrison	Date: 06/19/19
3 max 6 pts.	3 subtotal	Metric 1. Wetland Ar Select one size class and assign s >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to <2	ea (size). score. 0.2ha) (5 pts)	
		10 to <25 acres (4 to <10.1	ha) (4 pts) a) (3 pts) 2ha) (2 pts) 0.12ha) (1 pt)	
7 ax 14 pts.	10 subtotal	Metric 2. Upland buff 2a. Calculate average buffer width. Set WIDE. Buffers average 50 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use. VERY LOW. 2nd growth of X LOW. Old field (>10 years MODERATELY HIGH. Re X HIGH. Urban, industrial, op	Hers and surrounding elect only one and assign score. Do no m (164 ft) or more around wetland per 25m to <50m (82 to <164ft) around w average <10m (<32ft) around wetland Select one or double check and avera r older forest, prairie, savannah, wildlif , shrubland, young second growth for sidential, fenced pasture, park, conser pen pasture, row cropping, mining, cor	to touble check. rimeter (7) retland perimeter (4) wetland perimeter (1) perimeter (0) ge. e area, etc. (7) est. (5) vation tillage, new fallow field. (3) nstruction. (1)
19	29	Metric 3. Hvdrology.		
iax 30 pts.	subtotal	3a. Sources of Water. Score all that a High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface X Perennial surface water (la 3c. Maximum water depth. Select only X >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1)	oply. ce water (3) ke or stream (5) one and assign score. (2) reg <u>ime. Score one or double check a</u> r	3b. Connectivity. Score all that apply. 100 year floodplain (1) X Part of wetland/upland (e.g. forest), complex (1) X Part of riparian or upland corridor (1) 3d. Duration inundation/saturation. Score one or dbl check. X Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) X Seasonally saturated in upper 30cm (12in) (1) nd average.
		X Recovered (7) X Recovering (3) Recent or no recovery (1)) Check all disturbances observed ditch tile dike weir stormwater input	point source (nonstormwater) filling/grading road bed/RR track dredging X Other-tire rut wetland located within and and ajd an access road
11 ax 20 pts.	40 subtotal	Metric 4. Habitat Alter 4a. Substrate disturbance. Score one None or none apparent (4) X Recovered (3) X Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only Excellent (7)	or double check and average.	ment.

		Excellent (7)				
		Very good (6)				
		Good (5)				
	Х	Moderately good (4)				
		Fair (3)	Fair (3)			
		Poor to fair (2)				
		Poor (1)				
	4c. Habitat	t alteration. Score one or doub	ole check a	and average.		
]		None or none apparent (9)	Check a	all disturbances observed		
	Х	Recovered (6)	Х	mowing		shrub/sapling removal
	Х	Recovering (3)		grazing		herbaceous/aquatic bed removal
		Recent or no recovery (1)	Х	clearcutting	Х	sedimentation
40			Х	selective cutting		dredging
40			Х	woody debris removal		farming
subtotal this page				toxic pollutants	Х	nutrient enrichment

WETLAND 2 ORAM v. 5.0 Field Form Quantitative Bating Site: **DP&L Bath Substation Project** Brooke Harrison Date: 06/19/19 40 subtotal first pag Metric 5. Special Wetlands. 40 0 Check all that apply and score as indicated nax 10 pt Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland -unrestricted hydrology (10) Lake Erie coastal/tributary wetland-restricted hydrology (5) Lake Plain Sand Prairies (Oak Openings) (10) Relict Wet Prairies (10) Known occurrence state/federal threatened or endangered species (10) Significant migratory songbird/water fowl habitat or usage (10) Category 1 Wetland. See Question 1 Qualitative Rating (-10) Metric 6. Plant communities, interspersion, microtopography. 40 0 6a. Wetland Vegetation Communities. Vegatation Community Cover Scale max 20 pts subtota Score all present using 0 to 3 scale. Absent or comprises <0.1ha (0.2471 acres) contiguous area Present and either comprises small part of wetland's vegetation Aquatic bed 1 and is of moderate quality, or comprises a significant part but is Emergent 1 of low quality Present and either comprises significant part of wetland's 0 Shrub 2 vegetation and is of moderate quality, or comprises a small part Forest and is of high guality. Present and comprises significant part, or more, of wetland's Mudflats 3 vegetation and is of high quality. Open Water Other 6b. Horizontal (plan view) Interspersion. Narrative Description of Vegetation Quality Score only one. Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species High (5) mod Native spp are dominant component of the vegetation, although Moderately high (4) nonnative and/or disturbance tolerant native spp can also be Moderate (3) present, and species diversity moderate to moderately high, but generally w/o presence of rare, threatened, or endangered spp Moderately low (2) high A predominance of native species, with nonnative spp and/or Х Low (1) disturbance tolerant native spp absent or virtually absent, and None (0) high spp diversity and often, but not always, the presence of rare, 6c. Coverage of invasive plants. Refer to threatened, or endangered spp Table 1 ORAM long form for list. Add or Mudflat and Open Water Class Quality deduct points for coverage. Absent <0.1ha (0.247 acres) 0 Extensive >75% cover (-5) 1 Low 0.1 to <1ha (0.247 to 2.47 acres) 2 Х Moderate 25-75% cover (-3) Moderate 1 to <4ha (2.47 to 9.88 acres) Sparse 5-25% cover (-1) 3 High 4ha (9.88 acres) or more Nearly absent <5% cover (0) **Microtopography Cover Scale** 0 Absent (1) Absent Present in very small amounts or if more common of marginal 6d. Microtopography. 1 quality Score all present using 0 to 3 scale. 1 Vegetated hummucks/tussucks Present in moderate amounts, but not of highest quality or in 2 0 Coarse woody debris >15cm (6in) small amounts of highest quality

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

Standing dead >25cm (10in) dbh

Amphibian breeding pools

0

0

Refer to the most recent ORAM score calibration report for the scoring breakpoints between categories at the following address: http://epa.state.oh.us/dsw/401/401.html

3

Present in moderate or greater amounts and of highest quality

ORAM	Summary	/ Worksheet
------	---------	-------------

		circle	
		answer or	
		insert	Result
		score	
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	3	
	Metric 2. Buffers and surrounding land use	7	
	Metric 3. Hydrology	19	
	Metric 4. Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	0	
	TOTAL SCORE	40	Category based on score breakpoints Mod. Cat. 2

Complete 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 over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland		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?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the <i>"gray zone"</i> for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria		Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> 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.

	Tillar Gategory	
Choose one Categ	ory 1 Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

ATTACHMENT C - THREATENED AND ENDANGERED SPECIES CORRESPONDENCE

Harrison, Brooke

From:	susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov></ohio@fws.gov>
Sent:	Friday, August 16, 2019 3:11 PM
То:	Harrison, Brooke
Cc:	nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us
Subject:	Burns McDonnell No.116386 DP&L Bath 345 KV Substation, Greene County



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



TAILS# 03E15000-2019-TA-1618

Dear Ms. Harrison,

We have received your recent correspondence requesting information about the subject proposal. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The U.S. Fish and Wildlife Service (Service) recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the 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. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

FEDERALLY LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the federally endangered **Indiana bat** (*Myotis sodalis*) and the federally threatened **northern long-eared bat** (*Myotis sodalis*). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed 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 where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags \geq 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat. 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 and abandoned mines.

Should the proposed site contain trees ≥ 3 inches dbh, we recommend that trees be saved 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 that removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is being 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 <u>http://www.fws.gov/midwest/endangered/mammals/nleb/index.html</u>), 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, summer surveys may be conducted to document the presence or probable absence of Indiana bats within the project area during the summer. If a summer survey documents probable absence of Indiana bats, the 4(d) rule for the northern long-eared bat could be applied. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Endangered Species Coordinator for this 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.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

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

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 ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

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

Sincerely,

Patrice M. Ashfield, Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW Kate Parsons, ODNR-DOW

Harrison, Brooke

From:	Ohio, FW3 <ohio@fws.gov></ohio@fws.gov>
Sent:	Monday, August 5, 2019 12:23 PM
То:	Harrison, Brooke
Subject:	Thank you for contacting the USFWS Re: [EXTERNAL] DP&L Bath Substation Expansion
-	Project - Project Concurrence Request

Thank you for contacting the USFWS. This email is your notice that we have received your project, and you can expect a reply and/or a review of your project within 30 days from the date it was received. Of course, general questions will be answered ASAP.

We also have a new Field Office Supervisor, Ms. Patrice M. Ashfield.

You can send your projects to her attention, but please continue to use this email box for expedited processing.

Sincerely, Susan (614) 416-8993, Ext. 10

Harrison, Brooke

From:	Harrison, Brooke	
Sent:	Monday, August 5, 2019 12:20 PM	
То:	Ohio@fws.gov	
Cc:	susan_zimmermann@fws.gov; Everard, Robert	
Subject:	DP&L Bath Substation Expansion Project - Project Concurrence Request	
Attachments:	USFWS_DP&L_Bath Substation Expansion Project_Concurrence Request Letter.pdf; Project Area Shapefiles.zip	

Ms. Ashfield,

The Dayton Power and Light Company (DP&L) is proposing to expand the Bath Substation in Greene County, Ohio. Attached is a project concurrence request letter and figures, along with a shapefile showing the project area.

If you have any questions, please contact me by phone at 614-453-7833 or by email at <u>bharrison@burnsmcd.com</u>.

Sincerely,

Brooke Harrison \ Burns & McDonnell

Project Manager \ Environmental Services o 614-453-7833 \ M 216-527-4781 <u>bharrison@burnsmcd.com</u> \ <u>burnsmcd.com</u> 530 W. Spring St, Suite 200, Columbus, OH 43215

Click here to join our Talent Community!



August 5, 2019

Patrice Ashfield, Field Office Supervisor U.S. Fish & Wildlife Service 4625 Morse Road, Suite 104 Columbus, OH 43230

Re: Project Concurrence Request Bath Substation Expansion Project Burns & McDonnell Project #116386

Dear Ms. Ashfield:

The Dayton Power and Light Company (DP&L) is proposing to install a second new 345/138kV transformer at the Bath Substation in Greene County, Ohio. The project location and potential work area are shown on Figures 1 and 2 (lat. 39.767705, long. -83.978084).

It is anticipated that work activities will require less than twenty percent expansion of the existing fenced area, and most of the work activities will occur within and near existing maintained ROW and will use existing field drives to the extent possible for temporary access and construction. Streams are not located within the project area, thus no in-stream work will occur. No forested habitat and very few trees are located within the project area, and no potential bat habitat trees were identified during the survey. Construction is expected to start on or about September 1, 2020.

On behalf of DP&L, Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) is requesting concurrence that the Project as proposed will not have adverse effects on federally listed species or their habitat. If you have any questions or comments about the project or require additional information, please contact me by phone at 614-453-7833 or by email at <u>bharrison@burnsmcd.com</u>.

Sincerely,

Bose Hower

Brooke Harrison, Project Manager

Encl.

cc: Timothy Bockhorn, DP&L Robert G. Everard, Burns & McDonnell




Harrison, Brooke

From:	EnvironmentalReviewRequest@dnr.state.oh.us
Sent:	Monday, August 5, 2019 12:15 PM
То:	Harrison, Brooke
Subject:	Thank you for contacting the Ohio Department of Natural Resources

Thank you for contacting the Ohio Department of Natural Resources. This email is your receipt that we have received your message and/or project review request. During normal business operations, we strive to respond to your request within 30 to 45 business days. However, during certain times of the year, due to large volumes of requests, our response time may be longer. If you have any questions please contact our office at 614-265-6397.

Sincerely,

Sarah Tebbe Ohio Department of Natural Resources Office of Real Estate 2045 Morse Road Columbus, Ohio 43229 (614) 265-6397



Harrison, Brooke

From:	Harrison, Brooke
Sent:	Monday, August 5, 2019 12:13 PM
То:	environmentalreviewrequest@dnr.state.oh.us
Cc:	sarah.tebbe@dnr.state.oh.us
Subject:	Environmental Review
Attachments:	Project Area Shapefiles.zip; ODNR_DP&L_Bath Substation Expansion Project_Env Review Request Letter.pdf

On behalf of The Dayton Power and Light Company (DP&L), Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) is requesting an environmental review for a Substation Expansion Project located in Greene County, Ohio. Attached is an Environmental Review Request letter and figures, along with a shapefile showing the project area.

If you have any questions, please contact me by phone at 614-453-7833 or by email at <u>bharrison@burnsmcd.com</u>.

Sincerely,

Brooke Harrison \ Burns & McDonnell

Project Manager \ Environmental Services o 614-453-7833 \ M 216-527-4781 <u>bharrison@burnsmcd.com</u> \ <u>burnsmcd.com</u> 530 W. Spring St, Suite 200, Columbus, OH 43215

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August 5, 2019

John Kessler Ohio Department of Natural Resources Division of Wildlife 2045 Morse Road, Bldg. E-2 Columbus, OH 43229-6693

Re: Environmental Review Request Bath Substation Expansion Project Burns & McDonnell Project #116386

Dear Mr. Kessler:

The Dayton Power and Light Company (DP&L) is proposing to install a second new 345/138kV transformer at the Bath Substation in Greene County, Ohio. The project location and potential work area are shown on Figures 1 and 2 (lat. 39.767705, long. -83.978084). On behalf of DP&L, Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) is requesting an environmental review of the project.

It is anticipated that work activities will require less than twenty percent expansion of the existing fenced area, and most of the work activities will occur within and near existing maintained ROW and will use existing field drives to the extent possible for temporary access and construction. Streams are not located within the project area, thus no in-stream work will occur. No forested habitat and very few trees are located within the project area, and no potential bat habitat trees were identified during the survey. Construction is expected to start on or about September 1, 2020.

If you have any questions or comments about the project or require additional information, please contact me by phone at 614-453-7833 or by email at <u>bharrison@burnsmcd.com</u>.

Sincerely,

Basto Harnest

Brooke Harrison, Project Manager

Encl.

cc: Timothy Bockhorn, DP&L Robert G. Everard, Burns & McDonnell





This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

9/10/2019 9:15:15 AM

in

Case No(s). 19-1345-EL-BNR

Summary: Notice of Construction for the Bath Substation Expansion Project before the Ohio Power Siting Board electronically filed by Mr. Randall V Griffin on behalf of The Dayton Power and Light Company