

Letter of Notification for Lockbourne 138 kV Station Project



PUCO Case No. 20-0952-EL-BLN

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

Submitted by:
AEP Ohio Transmission Company, Inc.

May 22, 2020

Letter of Notification

AEP Ohio Transmission Company, Inc. Lockbourne 138 kV Station Project

4906-6-05

AEP Ohio Transmission Company, Inc. (“AEP Ohio Transco” or the “Company”) provides the following information to the Ohio Power Siting Board (“OPSB”) in accordance with the requirements of Ohio Administrative Code Section 4906-6-05.

4906-6-5(B) General Information

B(1) Project Description

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

The Company has identified the need to construct the Lockbourne 138 kV Station Project (the “Project”) in Harrison Township, Pickaway County, Ohio. The Project consists of constructing a new transmission substation that will provide service to a customer who is anticipating increased load in the area. The station will be approximately 2 acres and located adjacent to the customer’s existing station. The station will receive looped service via a line extension from the Harrison-Lemaster 138 kV circuit (this line extension will be filed with OPSB under separate cover).

The Company is in the process of acquiring approximately 8 acres of land to construct and operate the station. The Project will be constructed entirely on this property. The location of the property to be purchased by the Company (the “Project Area”) is shown in Figure 1 and 2 in Appendix A.

The Project meets the requirements for a Letter of Notification (“LON”) because it is within the types of projects defined by (3) of Appendix A to Ohio Administrative Code Section 4906-1-01, *Application Requirement Matrix for Electric Power Transmission Lines*:

(3) *Constructing a new electric power transmission substation.*

The Project has been assigned PUCO Case No. 20-0952-EL-BLN.

B(2) Statement of Need

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

AEP Ohio Transco is proposing to build a new AEP-owned Lockbourne station (hereinafter referred to as “AEP Lockbourne Station”) and associated double-circuit 138kV transmission line

AEP Ohio Transmission Company, Inc.
May 22, 2020

Lockbourne 138 kV Station Project
20-0952-EL-BLN

to serve South Central Power's rebuilt Lockbourne 138kV station (hereinafter referred to as "SCP Lockbourne Station"). South Central's existing delivery point is currently served by a one-mile radial line from AEP Ohio's Harrison Station. The existing radial line is jointly owned by AEP Ohio and South Central Power. The proposed AEP Lockbourne Station will provide looped service to South Central Power's new delivery point by tying into AEP Ohio's Harrison – Lemaster 138 kV circuit via a short double-circuit 138 kV extension. The proposed AEP Lockbourne Station is located adjacent to the Harrison-Lemaster 138 kV circuit.

The Project will provide the required service to SCP's Lockbourne substation while also providing additional operational flexibility and increased reliability with the looped 138kV transmission line. Without the AEP Lockbourne Station and transmission line, South Central Power would still be served radially from AEP Ohio's Harrison Station via a wood pole line constructed in the 1960s. The historical performance of the radial line currently serving South Central Power is tied to its current condition and radial nature. If AEP and South Central Power were to address the radial line and continue to serve South Central Power in its current location, the line would have to be taken out of service while it was being rebuilt, resulting in long, sustained outages to customers served by South Central Power. Additionally, there is very limited capability to transfer the existing 65 MW load to other sources and generally, the load cannot be picked up for an outage of the existing radial line under peak load conditions. South Central Power customers have been subjected to 2.7 million customer minutes of interruption from 2015-2018. The performance will continue to deteriorate without this Project. Furthermore, the current radial configuration restricts the ability to perform routine maintenance and often results in extended outages to customers.

The need and solution were presented and reviewed with stakeholders at the March 25th, 2019 and February 21st, 2020 PJM SRRTEP Western meeting. The Project was subsequently assigned PJM project number s2198. The Project is also included in the Company's 2020 Long Term Forecast Table FE-T10 page 85 of 87 (see Appendix B).

B(3) Project Location

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

The location of the Project in relation to existing transmission lines and stations is shown on Figure 1.1. The Project directly impacts the following existing facilities:

- Good Hope Switch-Harrison 138 kV transmission line

B(4) Alternatives Considered

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

The proposed Project is located on property to be purchased by the Company and borders an existing South Central Power substation. This property is currently undeveloped and non-forested and does not contain any streams or wetlands. The location of the Project minimizes impacts to the community and the environment, while taking into account the engineering and construction needs of the Project. Therefore, no significant alternatives were studied as part of the Project.

B(5) Public Information Program

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

The Company will inform affected property owners and tenants about the Project through several different mediums. Within seven days of filing this LON, the Company will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements under Ohio Administrative Code Section 4906-6-08(A)(1)-(6). Further, the Company will mail a letter, via first class mail, to affected landowners, tenants, contiguous owners, and any other landowner that the Company may approach for an easement necessary for the construction, operation, or maintenance of the Project. The letter will comply with all the requirements of Ohio Administrative Code 4906-6-08(B). The Company also maintains a website (<http://aeptransmission.com/ohio/>), which provides the public access to an electronic copy of this LON and the public notice for this LON. An electronic copy of the LON will be served to the public library in each political subdivision for this Project. The Company retains rights-of way ("ROW") land agents that discuss Project timelines, construction and restoration activities and convey information to affected owners and tenants throughout the Project.

B(6) Construction Schedule

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

Construction of the Project is planned to begin in August 2020, and the anticipated in-service date will be approximately June 2021.

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.

Appendix A, Figure 1 provides a topographical map of existing and proposed facilities at 1:24,000, and Figure 2 provides an aerial image showing roads and highways, clearly marked with Project components.

To visit the Project from Columbus, take US-23 S/S High Street towards Portsmouth. Turn left onto Picway Road. Take Picway Road for 0.7 mile then turn left on Shepherd Rd. Continue on Sheperd Road for 0.6 mile before turning left to stay on Sheperd Road for an additional 0.6 mile.

Finally, turn right onto Circleville Lockbourne Road and the Lockbourne Station will be immediately on the left. The coordinates of the entrance to the Lockbourne Station is latitude 39.796415, longitude -82.974468

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 an approximately 29 acre parcel (Parcel Number D12-0-003-00-278-00). The Company currently has an option to purchase approximately 8 acres of the parcel for construction and operation of the station, access roads, and detention basin for the Project. No other property easements, options, or land use agreements are necessary to construct the Project.

B(9) Technical Features

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

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

Equipment proposed for the Project include:

- 1) 6- 138kV circuit breakers
- 2) 1 – 138 kV capacitor bank
- 3) 1 – Drop in Control Module (DICM)

B(9)(b) Electric and Magnetic Fields

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

B(9)(b)(i) Calculated Electric and Magnetic Field Strength Levels

i) Calculated Electric and Magnetic Field Levels

Not applicable. The proposed Project is a substation and there are no occupied residences or institutions located within 100 feet of the Project.

B(9)(b)(ii) Design Alternatives

A discussion of the applicant's consideration of design alternatives with respect to electric and magnetic fields and their strength levels, including alternate conductor configuration and phasing, tower height, corridor location, and right-of-way width.

Not applicable. The proposed Project is a substation and there are no occupied residences or institutions located within 100 feet of the Project.

B(9)(c) Project Cost

The estimated capital cost of the project.

The cost estimate for the proposed Project, comprised of applicable tangible and capital costs, is approximately \$9,500,000, using a Class 4 estimate.

B(10) Social and Economic Impacts

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

B(10)(a) Land Use Characteristics

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

The Project is located within Harrison Township in Pickaway County, Ohio. The parcel is zoned agricultural and land uses in the Project area consists of agricultural fields. It is anticipated that no tree clearing will be required for the Project.

No residences are located in the Project area or within 100 feet of it. There are currently three residences located within 1,000 feet of the Project area. There are no parks, schools, churches, cemeteries, wildlife management areas, or nature preserve lands within 1,000 feet of the Project area.

B(10)(b) Agricultural Land Information

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

The Project is not located within a registered agricultural district, based on coordination with the Pickaway County Auditor's Office on April 24, 2020. Based on field surveys, there are approximately 13.3 acres of agricultural land in the Project area, comprised primarily of rotating corn/soybean fields (see Figure 3 in Appendix B).

B(10)(c) Archaeological and Cultural Resources

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

The Company's consultant conducted a cultural resource survey and report for the Project in April 2020. The investigations did not result in the identification of any archaeological sites. No further archaeological work is considered for this Project. During the architectural investigations, four resources 50 years of age or older were identified within the viewshed that were previously recorded. Three of the four resources were advanced to detailed study and recommended as eligible for inclusion in the National Register of Historic Places ("NHRP"). Since the proposed Project consists of construction of an electric station directly south of an existing station, the consultant recommends a finding of "No Adverse Effects". Consultation with the State Historic Preservation Office ("SHPO") will occur and be coordinated directly with the OPSB once complete.

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

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

A Notice of Intent ("NOI") will be filed with the Ohio Environmental Protection Agency ("OEPA") for authorization of construction storm water discharges under General Permit OHC000005, and the Company will implement and maintain best management practices ("BMPs"), as outlined in the project-specific Storm Water Pollution Prevention Plan (SWPPP), to minimize erosion and control sediment to protect surface water quality during storm events. The Project will not impact any streams or wetlands, and no tree clearing will be required for the Project (see Appendix C). Consequently, the Project will not require a Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers or Pre-Construction Notification to the U.S. Army Corps of Engineers.

The Project is not located within Federal Emergency Management Agency (FEMA) 100-year floodplain area (Federal Emergency Management Agency, Flood Insurance Rate Map, Panel 390445, Map Number 39129C0075J, Effective Date July 22, 2010). Therefore, no floodplain permitting is required for the Project.

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

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

Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special

interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

The United States Fish and Wildlife Service (“USFWS”) Ohio Ecological Services Field Office list of federally endangered, threatened, and candidate species in Ohio by County (available at <https://www.fws.gov/midwest/ohio/EndangeredSpecies/pdf/SpeciesListByCountyApril2018.pdf>) was reviewed to determine the threatened and endangered species currently known to occur, or that potentially occur, in Pickaway County. This USFWS publication listed the following threatened and endangered species and federal species of concern as occurring in Pickaway County: Indiana bat (*Myotis sodalis*; federally endangered), northern long-eared bat (*Myotis septentrionalis*; federally threatened), Scioto madtom (*Noturus trautmani*; federally endangered), clubshell (*Pleurobema clava*; federally endangered), northern riffleshell (*Epioblasma torulosa rangiana*; federally endangered), rabbitsfoot (*Quadrula cylindrica cylindrica*; federally threatened), rayed bean (*Villosa fabalis*; federally endangered), snuffbox (*Epioblasma triquetra*; federally endangered), and running buffalo clover (*Trifolium stoloniferum*; federally endangered).

As part of the ecological study completed for the Project, a coordination letter was submitted to the USFWS Ohio Ecological Services Field Office seeking technical assistance on the Project for potential impacts to threatened or endangered species. The March 20, 2020 response letter from the USFWS (see Appendix C) stated that should the Project site contain trees ≥ 3 inches diameter at breast height (“dbh”), USFWS recommends trees be saved wherever possible. If any caves or abandoned mines may be disturbed, further coordination is requested. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, USFWS recommends that removal of trees ≥ 3 inches dbh only occur between October 1 and March 31 to avoid adverse effects to Indiana bats and northern long-eared bats. The Project will not require waterway impacts or tree clearing, thus impacts to these federal species are not anticipated.

The USFWS letter did not include any comments specific to the other federally listed species.

Several state-listed threatened species, endangered species, and species of concern are listed by the Ohio Department of Natural Resources (<http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/species%20and%20habitats/state-listed%20species/pickaway.pdf>) as occurring, or potentially occurring in Pickaway County. These state-listed species are addressed in detail in the Ecological Resources Inventory Report included in Appendix C. No Project-related impacts to any state-listed threatened or endangered species are anticipated. A coordination letter was submitted via email to the Ohio Department of Natural Resources (“ODNR”) - Office of Real Estate on March 4, 2020 seeking an environmental review of the proposed Project for potential impacts on state-listed and federally-listed threatened or endangered species. Correspondence from ODNR – Office of Real Estate was received on April 27, 2020 (see Appendix C).

According to the ODNR - Office of Real Estate, the Project area is within the range of the Indiana bat. If suitable habitat occurs within the Project area, the ODNR recommends trees be conserved. If suitable habitat occurs within the Project area and trees must be cut, the ODNR recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer

months, the response recommends a net survey be conducted between June 1 and August 15, prior to any cutting. If no tree removal is proposed, this Project is not likely to impact this species. No tree clearing is anticipated for the Project, therefore, no impacts to this species is anticipated.

Additionally, the ODNR stated that there are records of one fish species and nine mussel species within a one-mile radius of the Project area. There is no suitable habitat for these species within the Project area and no in-water work is proposed by the Company. Therefore, no impacts to these species are anticipated.

The ODNR-Office of Real Estate also stated that the Project area is within the range of 19 mussel species, 10 fish species, and one bird species. The ODNR stated that due to the location, and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact fish or mussel species. Additionally, the Project area is also within the range of the upland sandpiper. However, ODNR stated that if no suitable nesting habitat is present within the Project area and/or if construction is avoided in suitable nesting habitat for this species during its nesting period (April 1 – July 31), the Project is not likely to impact this species. No suitable nesting habitat for the upland sandpiper is present within the Project area.

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.

Coordination letters were submitted to the ODNR and USFWS in March 2020 requesting a review of the Project area and identification of areas of ecological concern. Response indicated that there are no areas of ecological concern reported as occurring at or within one mile of the Project area. Correspondence received from the USFWS indicated that there are no federal wilderness areas, wildlife refuges, or designated critical habitat in the Project vicinity (see Appendix C).

The FEMA Flood Insurance Rate Map was consulted to identify any floodplains/flood hazard areas that have been mapped in the Project area (specifically, FEMA, Flood Insurance Rate Map, Panel 390445, map number 39129C0075J). Based on this map, no mapped FEMA floodplains are located in the Project area. Therefore, no floodplain permits will be required for this Project.

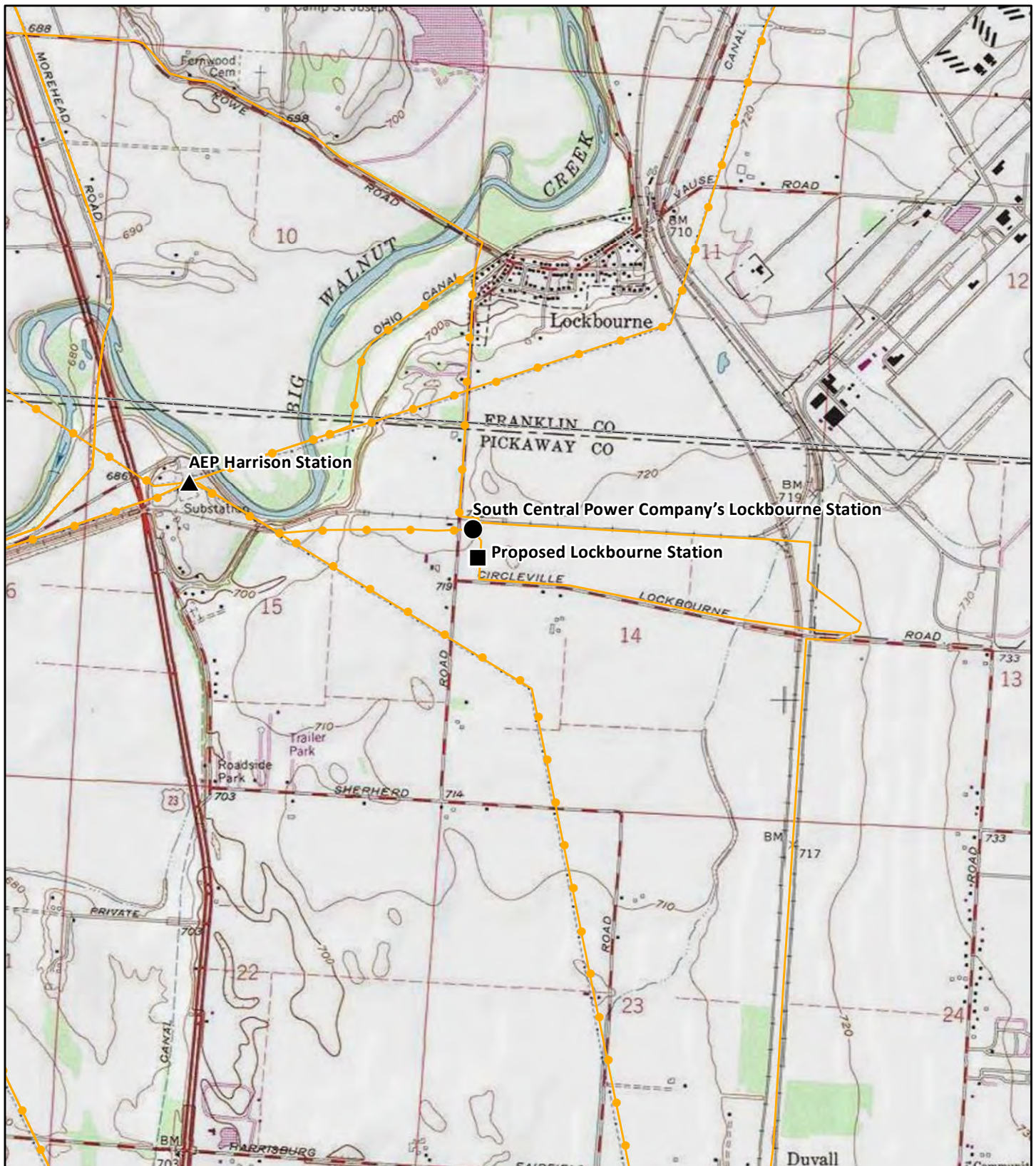
Wetland and stream delineation field surveys were completed within the Project area by the Company's consultant in April 2020. The results of the wetland and stream delineations are presented in the Ecological Resources Inventory Report included in Appendix C. No streams or wetlands were identified within the Project area (see Appendix C).

B(10)(g) Unusual Conditions

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

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

Appendix A Project Maps and Figures



LEGEND:

- ▲ Existing AEP Station
- Existing South Central Power Company Station
- Proposed Station
- 69 kV or Lower Voltage Transmission
- 138 kV Voltage Transmission

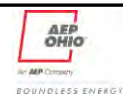
Data Sources:
AEP, Stantec,
PennWell, USGS

Coordinate System
and Datum:
NAD 83 State Plane
Ohio South

May 21, 2020

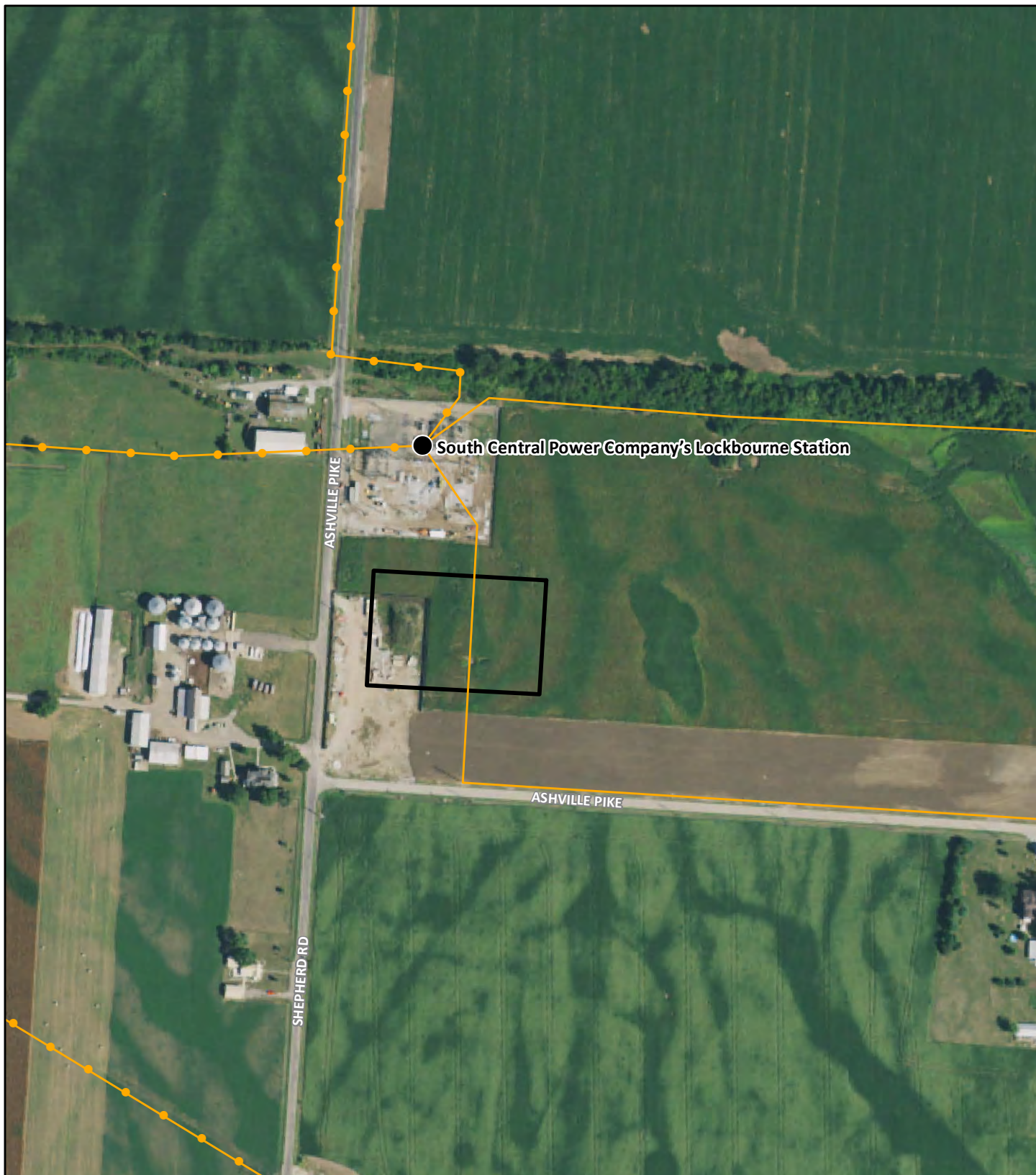


FIGURE 1 TOPOGRAPHIC OVERVIEW



Lockbourne 138 kV
Station Project

0 1,000 2,000
Feet



LEGEND:

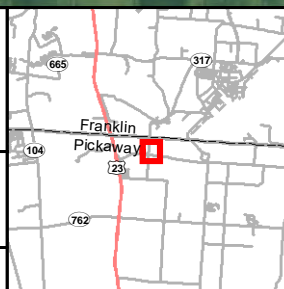
- Existing South Central Power Company Station
- ▭ Proposed Station Fence
- 69 kV or Lower Voltage Transmission Line
- 138 kV Voltage Transmission Line

Data Sources or Notes:
AEP (2020), Stantec (2020),
PennWell (2020), NAIP (2019)

Coordinate System
and Datum:
NAD 83 State Plane
Ohio South



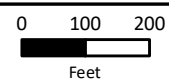
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**FIGURE 2
AERIAL MAP**



**Lockbourne 138 kV
Station Project**



Appendix B PJM Submittal and 2020 Long Term Forecast Report

AEP Transmission Zone M-3 Process

Pickaway, Ohio

Need Number: AEP-2019-OH012

Process Stage: Solutions Meeting 02/21/2020

Previously Presented: Needs Meeting 03/25/2019

Supplemental Project Driver:
Customer Service

Specific Assumption References:

AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions slide 7)

Problem Statement:

- South Central Power is rebuilding Lockbourne 138kV Station due to asset renewal conditions. Lockbourne is currently radially served via AEP's Harrison Station, this line is partially owned by AEP and South Central Power with the point of ownership change being Circleville. The current loading on this radial line is 65MW with plans for increased load. Total CMI 2.7M over 3 year period. (2015-2018).
- Radial service restricts the ability to perform routine maintenance and can cause extended outages to customers. The maintenance of radial transmission lines often requires cost-prohibitive temporary facilities or other labor-intensive measures.



AEP Transmission Zone M-3 Process

Pickaway, Ohio

Need Number: AEP-2019-OH012

Process Stage: Solutions Meeting 02/21/2020

Proposed Solution:

- Build new 0.3 mile double circuit 138kV extension from the Harrison – Lemaster 138kV Circuit to the new Lockbourne 138kV station Fiber will also be installed on the line. **Cost: \$2.0M**
- Remove the existing 138 kV radial line from AEP Harrison to SCP Harrison station. **Cost: \$0.3M**
- Build three short lines to interconnect to SCP’s Lockbourne station to serve their three transformers. **Cost: \$0.1M**
- Build a new 138kV five (5) breaker switch station (Lockbourne) with 3000A 40kA breakers and a capacitor bank (28.8 MVAR) to provide service to three SCP deliveries at the site. **Cost: \$11.1M**
- Remove existing breaker 3E from the ring bus at Harrison. **Cost: \$0.3M**

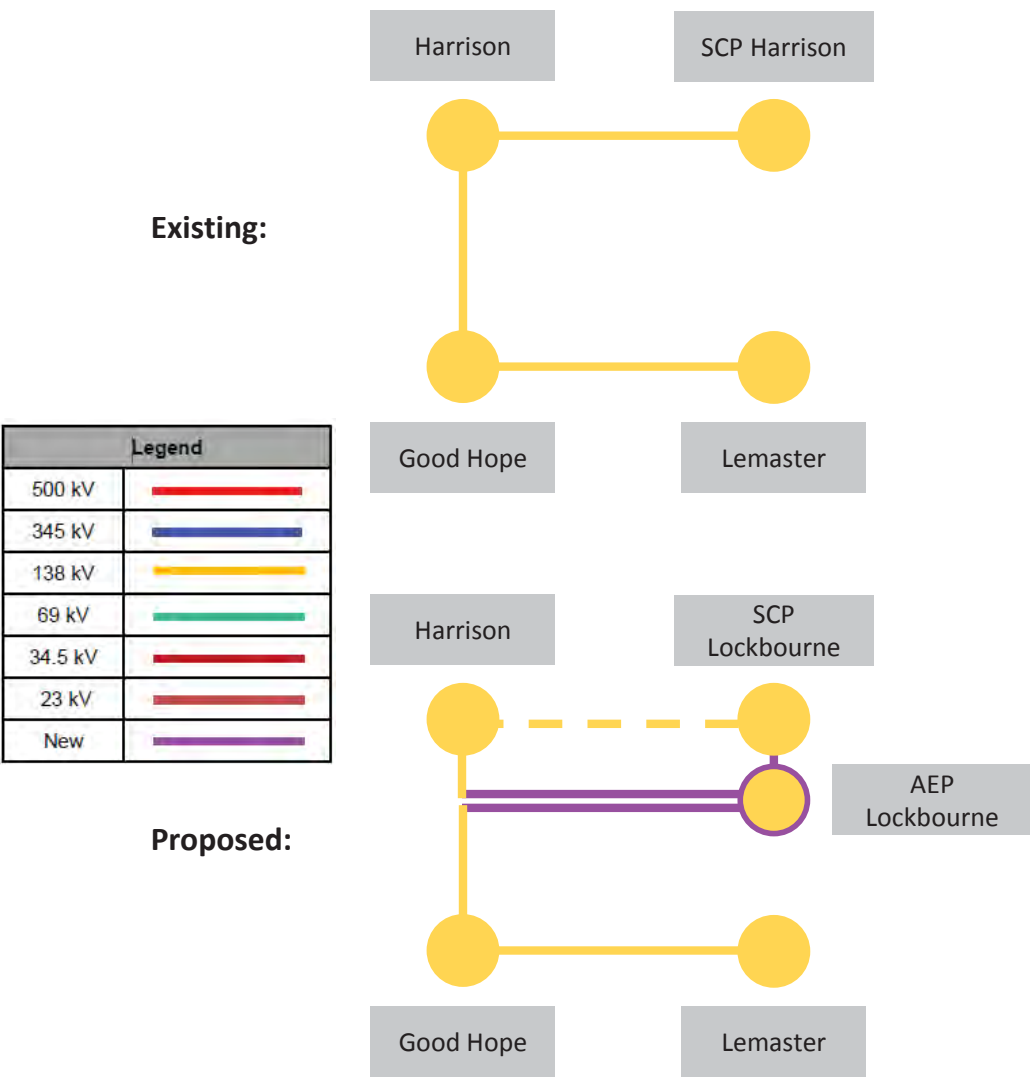
Total Estimated Transmission Cost: \$13.8M

Alternatives Considered:

No other alternates have been identified by the customer to serve their needs.

Projected In-Service: 09/23/2021

Project Status: Scoping



PUCO FORM FE-T10
AEP OHIO TRANSMISSION COMPANY
SUMMARY OF PROPOSED SUBSTATIONS

Substation Name	Voltage(s) (kV)	Type Distribution (D) Transmission (T)	Timing	Line Association(s)	Line Existing or Proposed	Minimum Substation Site Acreage
Arboles (pending)	138	T	2021	Arboles - Don Marquis	P	8
Arboles (pending)	138	T	2021	Arboles - South Lucasville	P	8
Arboles (pending)	138	T	2021	Arboles - Waverly	P	8
Babbitt	345	T	2019-2022	Babbitt - Jug Street 345kV	E/P	10-20 expansion
Babbitt	345	T	2019-2022	Babbitt - Kirk 345kV	E/P	10-20 expansion
Chrome	69	T	Jul-20	Chrome - North Coshocton 69kV and Chrome - Ohio Central 69kV	E	1
Compton	69	T	2020-21	Compton - East Wooster 69kV	P	2
Compton	69	T	2020-21	Compton - Schafrath 69kV	P	2
Compton	69	T	2020-21	Compton - West Wooster 69kV	P	2
Diamond Street	69	T	2020-22	Diamond Street - West Louisville 69kV	E	1
Diamond Street	69	T	2020-22	NE Canton - Diamond Street 69kV	E	1
Divelbiss	69	T	Dec-20	Divelbiss - Academia 69 kV	P	1
Divelbiss	69	T	Dec-20	Divelbiss - Mt. Vernon (L.R. Coop)	P	1
Divelbiss	69	T	Dec-20	Divelbiss Fredericktown 69 kV	P	1
Divelbiss	69	T	Dec-20	Divelbiss North Liberty 69 kV	P	1
Gemini	138	T	2020-2021	Gemini - West Moulton 138kV	P	3
Gemini	138	T	2020-2021	Gristmill - Gemini 138kV	P	3
Gristmill	345/138	T	2020-2021	Gristmill - Gemini 138kV	P	3
Gristmill	345/138	T	2020-2021	Gristmill - Shelby 345kV	P	3
Gristmill	345/138	T	2020-2021	Gristmill - Southwest Lima 345kV	P	3
Guernsey (IPP interconnection)	765	T	2019-2021	Kammer - Vassell 765kV	E	6
Hannibal (IPP interconnection)	138	T	2019-2021	Kammer - Ormet #1 138kV	E	4
Hannibal (IPP interconnection)	138	T	2019-2021	Kammer - Ormet #2 138kV	E	4
Hannibal (IPP interconnection)	138	T	2019-2021	Kammer - Ormet #3 138kV	E	4
Hannibal (IPP interconnection)	138	T	2019-2021	Kammer - Ormet #4 138kV	E	4
La Rue	138	T	2019-2021	Harpster - La Rue	E/P	20
La Rue	138	T	2019-2021	La Rue - North Waldo - West Mount Vernon	E/P	20
La Rue	138	T	2019-2021	South Kenton - La Rue	E/P	20
Lockbourne	138	T	2020-2022	Harrison - Lockbourne Switch 138kV	E/P	2.75
Lockbourne	138	T	2020-2022	Lemaster - Lockbourne Switch 138kV	E/P	2.75

Appendix C Ecological Resources Inventory Report



**Lockbourne 138 kV Station
Project
Pickaway County, Ohio**

**Ecological Resources Inventory
Report**

Prepared for:

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

Prepared by:

Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, OH 43204

May 11, 2020

Sign-off Sheet

This document entitled Lockbourne 138 kV Station Project, Pickaway County, Ohio, Ecological Resources Inventory Report was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of AEP Ohio Transmission Company, Inc. (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by Charlie Allen

(signature)

Charlie Allen

Reviewed by Michelle Kearns

(signature)

Michelle Kearns

Reviewed by Angela Sjollema

(signature)

Angela Sjollema

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LOCKBOURNE 138 KV STATION PROJECT, PICKAWAY COUNTY, OHIO, ECOLOGICAL RESOURCES INVENTORY REPORT

Introduction
May 11, 2020

1.0 INTRODUCTION

AEP Ohio Transmission Company, Inc. (AEP) plans to build a 138 kV substation (the Project) south of the City of Lockbourne in Pickaway County, Ohio (Figure 1, Appendix A). The Project area includes an approximate 13-acre parcel and associated access roads where work may occur during construction. The Project was surveyed for wetlands, waterbodies, open water features, upland drainage features, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) biologists on April 20, 2020. The approximate locations of features located up to 50 feet outside of the Project area were also recorded during the field surveys, where landowner access was permitted. However, no data forms were collected on features that did not extend into the Project area. These features are shown on the Figure 2 maps in Appendix A as "approximate" wetland, stream (waterway), open water, and upland drainage features.

Methods
May 11, 2020

2.0 METHODS

2.1 WETLAND DELINEATION

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

2.2 STREAM DELINEATION

Streams that demonstrated a continuously defined channel (bed and bank), ordinary high water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project area, per the protocols outlined in the USACE's Guidance on Ordinary High Water Mark Identification (Regulatory Guidance Letter, No. 05-05) (USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the Federal Register/Vol. 67, No. 10 (USACE 2002). Functional assessments of streams within the Project area were based on completion of the Ohio Environmental Protection Agency's (OEPA) Headwater Habitat Evaluation Index (HHEI; OEPA 2018) and/or Qualitative Habitat Evaluation Index (QHEI; OEPA 2006). The centerline and/or the OHWM locations of each waterway were identified and surveyed using a handheld sub-meter accuracy global positioning system (GPS) unit and mapped with GIS software. Additionally, the locations of upland drainage features (which lacked a continuously defined bed and bank/OHWM) identified within the Project area were also recorded with a sub-meter accuracy GPS unit during the field surveys.

2.3 RARE SPECIES

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

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3.0 RESULTS

3.1 TERRESTRIAL HABITAT

Stantec completed field surveys within the Project area on April 20, 2020, for potentially suitable habitats for threatened and endangered species. Figure 3 (Appendix A) shows the land cover, vegetation communities, and any identified rare, threatened, or endangered species habitat observed within the Project area during the habitat assessment surveys. Representative photographs of the vegetative communities/habitats identified within the Project area are included in Appendix C (photo locations are shown on Figure 3 in Appendix A). Information regarding the vegetation communities/habitats identified within the Project area is provided in Table 1.

Table 1. Vegetation Communities and Land Cover Found within the Lockbourne 138 kV Station Project Area, Pickaway County, Ohio

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Industrial Habitat	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa).	No	1.82
Agricultural Field	Moderate Disturbance/Natural Community (dominated by native and herbaceous species and/or opportunistic invaders). Dominant plant species included corn (<i>Zea mays</i>) and yellow rocket (<i>Barbarea vulgaris</i>).	No	11.51
Total			13.33

3.2 WETLANDS

No wetlands were delineated within the Project area during the field surveys completed April 20, 2020.

3.3 STREAMS

No streams were delineated within the Project area during the field surveys completed April 20, 2020.

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3.4 OPEN WATERS

No open waters (i.e., ponds, lakes) were delineated within the Project area during the field surveys completed on April 20, 2020.

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3.5 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 2. Summary of Potential Ohio State-Listed Species within the Lockbourne 138 kV Station Project Area, Pickaway County, Ohio.

Common Name	Scientific Name	State ¹ Listing	Known to Occur in Pickaway County? ²	Known Within One Mile of Project Area? ³	Habitat Preference ²	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Dragonfly								
Plains Clubtail	<i>Gomphus externus</i>	E	Yes	No	Lives in freshwater habitat (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	No comment.
Birds								
Lark Sparrow	<i>Chondestes grammacus</i>	E	Yes	No	This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	No comment.
Norther Harrier	<i>Circus hudsonius</i>	E	Yes	No	Northern harriers hunt low over grasslands. It is a common migrant and winter species; nesters are much rarer, although they occasionally breed in large marshes and grasslands (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	No comment.
Loggerhead Shrike	<i>Lanius ludovicianus</i>	E	Yes	No	The loggerhead shrike breeding habitat includes, open country with scattered trees and shrubs, savanna, desert scrub and occasionally, open woodlands. Their preferred nesting habitat is shortgrass pastures but are also found to use shrubs or small trees. (NatureServe 2020).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	No comment.
Sandhill Crane	<i>Grus canadensis</i>	T	Yes	No	Sandhill cranes are primarily a wetland dependent species. They will utilize agricultural fields for their wintering grounds. However, they roost in shallow, standing water or moist bottomlands. They require rather large tracts of wet meadows, shallow march or bog for breeding and nesting. Sandhill cranes are seasonal residents (ODNR Division of Wildlife 2020b).	Yes	Suitable wintering grounds is present within the Project area. However, due to construction occurring during the summer months, impacts to this species are not anticipated.	No comment.
Least bittern	<i>Ixobrychus exilis</i>	T	Yes	No	The least bittern hides in dense emergent marshes, particularly where there are thick cattail stands (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	No comment.
Barn Owl	<i>Tyto alba</i>	T	Yes	No	Barn owls hunt in open grasslands or grassy meadow. They nest in hollow trees, old buildings, barns, and silos (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	No comment.

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Common Name	Scientific Name	State ¹ Listing	Known to Occur in Pickaway County? ²	Known Within One Mile of Project Area? ³	Habitat Preference ²	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Upland Sandpiper	<i>Bartramia longicauda</i>	E	No	No	Upland sandpipers breed in grasslands, pastures, and unkempt agricultural land with a mosaic of old fields and crop lands, and sometimes the grassy expanses of airports (ODNR Division of Wildlife 2020b). Large areas of grassland/lightly-moderately grazed pasture habitats (>20 acres) are required to be suitable nesting habitat for the upland sandpiper (WDNR 2014).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	If any preferred nesting habitat for this species (dry grasslands, native grasslands, seeded grasslands, grazed and ungrazed pastures, hayfields, and grasslands) will be impacted, construction should be avoided during the species' nesting period (April 15 to July 31). If preferred nesting habitat will not be impacted, this Project is not likely to impact this species.
Fishes								
Spotted Darter	<i>Etheostoma maculatum</i>	E	Yes	No	This fish is found in medium sized rivers and streams. They are typically found in areas of swift current at the top or bottom end of a riffle where there are many very large boulders or flab slabs or rock. They spend most of their time hiding under the upstream edge of these large rocks with their heads sticking out watching for food (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	The Project is within the range of the spotted darter. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Goldeneye	<i>Hiodon alosoides</i>	E	Yes	No	This fish is found in large rivers and are rather tolerant of turbid waters from clay silts. They do not, however, tolerate industrial chemical pollutants. They are often found in areas with swift currents, often below dams. This fish is found in the Ohio River and its larger tributaries, particularly the Scioto River (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	The Project is within the range of the goldeneye. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Northern Brook Lamprey	<i>Ichthyomyzon fossor</i>	E	Yes	No	Adult lampreys are found in clear brooks with fast flowing water and sand or gravel bottoms. Juveniles are found in slow moving water buried in soft substrate in medium to large streams (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated	The Project is within the range of the northern brook lamprey. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Shortnose Gar	<i>Lepisosteus platostomus</i>	E	Yes	No	This fish is found in large rivers and associated overflow ponds and backwaters. This fish is found in the Ohio River and some of its larger tributaries, particularly the Scioto River (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	The Project is within the range of the shortnose gar. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Bigeye Shiner	<i>Notropis boops</i>	E	Yes	No	This fish is found in pools of small, very clear streams with sand or gravel substrates that often cease to flow in late summer, trapping the shiners in the pools. They are very intolerant to turbid waters (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	The Project is within the range of the bigeye shiner. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Northern Madtom	<i>Noturus stigmosus</i>	E	Yes	No	This fish is found in deep swift riffles of large rivers, usually found around cobbles and boulders. This species has a limited range and is only found in a few locations in the Muskingum, Scioto and Little Miami River drainages (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	The Project is within the range of the northern madtom. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.

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Scioto Madtom	<i>Noturus trautmani</i>	E	Yes	No	Only 18 individuals of the Scioto madtom have ever been found. Of those, 14 were found in the fall of 1957 and none have been seen since. No other fish has been searched for more persistently by researchers in Ohio than this species. This fish has never been found outside of Ohio and all 18 individuals were found in a small area of Big Darby Creek. They were found in the tail end of riffles over a sand and gravel substrate. Since all of the individuals were found in the fall it has been speculated that they may spend the remainder of the year further upstream. They likely eat various aquatic invertebrates like most other madtom species (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated.	The Project is within the range of the Scioto madtom. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	E	Yes	No	The Shovelnose sturgeon is a large river species that prefers sand and gravel substrates with rather fast current. Small numbers of this species are found in the Ohio river from Portsmouth to the Indian line and in the lower Scioto River (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	No comment.
Blue Sucker	<i>Cycleptus elongatus</i>	T	Yes	No	This fish is found in deep, swiftly flowing chutes or channels of large rivers. They can be found in fast, gravel bottomed chutes of the lower Scioto River, from Piketon downstream to the Ohio River and also present in the lower portion of the Great and Little Miami, Muskingum, and Hocking Rivers (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	No comment.
Lake Chubsucker	<i>Erimyzon sucetta</i>	T	Yes	No	This fish is found in natural lakes and very sluggish streams or marshes with dense aquatic vegetation and clear waters primarily found in glacially formed natural lakes often referred to as pothole or kettle lakes. This species is found in the group of lakes between Bellefontaine and Urbana, and three slow moving stream systems that have interconnected wetland complexes which include Killbuck Marsh, the upper Cuyahoga River, and the Black Fork of Symmes Creek including Jackson Lake (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the lake chubsucker. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Tippecanoe Darter	<i>Etheostoma Tippecanoe</i>	T	Yes	Yes	This fish prefers medium to large streams in the Ohio River drainage system and are found in riffles of moderate current with substrate of gravel or cobble sized rocks (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated	The Project is within the range of the Tippecanoe darter. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Paddlefish	<i>Polyodon spathula</i>	T	Yes	No	This fish is found in the Ohio River and its larger tributaries, preferring sluggish pools and backwater areas (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated	The Project is within the range of the paddlefish. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.

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Mussels								
Fanshell	<i>Cyprogenia stegaria</i>	E	Yes	No	This mussel is found in medium to large streams with gravel substrates and strong current, in both deep and shallow water (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the fanshell. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Butterfly	<i>Ellipsaria lineolata</i>	E	Yes	No	This mussel is found in large rivers and stretches with pronounced current and substrate of coarse sand and gravel. It can also be found in deep impoundment areas (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the butterfly. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Elephant-ear	<i>Elliptio crassidens</i>	E	Yes	Yes	This mussel is found in muddy sand, sand, and rocky substrates in moderate currents. In some areas, it is common in large creeks to rivers with moderate to swift currents primarily on sand and limestone or rock substrates (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the elephant-ear. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Purple Cat's Paw	<i>Epioblasma obliquata obliquata</i>	E	Yes	No	This mussel can be found in medium to large rivers with moderate gradient and riffles. Substrates can be sand to gravel (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the purple cat's paw. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Snuffbox	<i>Epioblasma triquetra</i>	E	Yes	No	Snuffbox is commonly found buried in the substrate. It is found in a wide range of particle sized substrates, however, swift shallow riffles with sand and gravel are where it is typically found (Parmalee and Bogan 1998, Watters et al. 2009).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the snuffbox. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Long-Solid	<i>Fusconaia maculata maculata</i>	E	Yes	No	This species is found in medium to large rivers in gravel with a strong current (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the long-solid. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Pink Mucket	<i>Lampsilis abrupta</i>	E	Yes	No	This species is found in large rivers, most commonly in fast-flowing waters with rocky or boulder substrates, but area also found in deeper waters with slower currents with sand and gravel substrates (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	No comment
Sharp-ridged Pocketbook	<i>Lampsilis ovata</i>	E	Yes	No	This mussel is a generalist, occurring in different sized streams/rivers. Typically occurs in moderate to strong current with substrates of gravel and coarse sand (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the sharp-ridged pocketbook. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Washboard	<i>Megaloniaias nervosa</i>	E	Yes	Yes	Occurs in large rivers, typically in main channel or overbank areas of reservoirs. It is found in areas of slow current with muddy to coarse gravel substrates and water can be up to 50 feet (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the washboard. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.

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Clubshell	<i>Pleurobema clava</i>	E	Yes	No	Clubshell is found in small to medium rivers, but occasionally found in large rivers, especially those having large shoal areas. It is generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle and cannot tolerate mud or slackwater conditions (USFWS 1994). Badra (2001) found the clubshell in gravel/sand substrate, runs having laminar flow (0.06-0.25 m/sec) within small to medium sized streams.	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the clubshell. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Ohio Pigtoe	<i>Pleurobema cordatum</i>	E	Yes	No	Occurs in medium to large rivers directly above riffles of gravel, cobble, and boulder, but occasionally in muddy or sandy or gravel habitats at great depths (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the Ohio pigtoe. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Pyramid Pigtoe	<i>Pleurobema rumbrum</i>	E	Yes	No	This mussel species typically inhabits large rivers but may also occur in medium -sized rivers. They are found in riffles or shoals in relatively shallow water and coarse-particle substrates, along sand bars or in deep water with stable mud and muddy sand bottoms (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the pyramid pigtoe. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Ebonyshell	<i>Fusconaia ebena</i>	E	Yes	No	This species inhabits large rivers and prefers swift water and stable sand or gravel shoals. Coarse sand and gravel substrate provide the most suitable habitat. It can occur at depths of 10-15 feet with current associated (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the ebonyshell. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Rabbitsfoot	<i>Quadrula (Thecliderma) cylindrica cylindrica</i>	E	Yes	Yes	The typical habitat for this species is small to medium rivers with moderate to swift currents, and in smaller streams it inhabits bars or gravel and cobble close to the fast current. Found in medium to large rivers in sand and gravel shoals (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the rabbitsfoot. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Rayed Bean	<i>Villosa fabalis</i>	E	Yes	Yes	Habitat includes gravel or sandy substrate, especially in areas of thick roots of aquatic plants, increase substrate stability (Butler 2002, Parmalee and Bogan 1998). Rayed bean can be associated with shoal or riffle areas, and in shallow, wave-washed areas of glacial lakes. It is generally found in smaller, headwater creeks, but sometimes in larger rivers and open-water bodies. It can occur in shallow riffles or in lakes with water depths up to four feet. It has been found in riffles, generally in vegetation, and deeply buried in sand and gravel bound together by roots (Parmalee and Bogan 1998).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the rayed bean. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	E	Yes	No	This mussel is found in a wide variety of streams from small to large (USFWS 2020c). Habitat for this species includes riffles and firmly packed substrates of fine to coarse gravel. This mussel needs highly oxygenated water (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the northern riffleshell. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Black Sandshell	<i>Ligumia recta</i>	T	Yes	Yes	Typically found in medium-sized to large rivers in locations with strong current and substrates of coarse sand and gravel with cobbles in water depths from several inches to six feet or more (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the black sandshell. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.

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Threehorn Wartyback	<i>Obliquaria reflexa</i>	T	Yes	No	Habitat includes large rivers with moderately strong current and stable substrate of gravel, sand, and mud (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the threehorn wartyback. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Fawnsfoot	<i>Truncilla donaciformis</i>	T	Yes	Yes	This species occurs in both large and medium-sized rivers at normal depths varying from less than three feet up to 15 to 18 feet in big rivers such as the Tennessee. A substrate of either sand or mud is suitable and although it is typically found in moderate current, it can adapt to a lake or embayment environment lacking current (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the fawnsfoot. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Pondhorn	<i>Uniomerus tetralasmus</i>	T	Yes	No	This species typically inhabits the quiet or slow-moving, shallow waters of sloughs, borrow pits, ponds, ditches, and meandering streams. It is tolerant of poor water conditions and can be found well buried in a substrate of fine silt and/or mud. It has been known to survive for extended periods of time when a pond or slough has temporarily dried up by burying itself deep into the substrate (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	The Project is within the range of the pondhorn. Due to the location, and that no in-water work proposed in a perennial stream, the Project is not likely to impact this species.
Elktoe	<i>Alasmidonta marginata</i>	SC	Yes	Yes	This species typically inhabits smaller streams, found in swift currents in firmly packed fine course gravel. It has also been found in large to medium sized streams as well (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	No Comment
Purple wartyback	<i>Cyclonaias tuberculata</i>	SC	Yes	Yes	This species typically inhabits a gravel/mud bottom, usually in areas of current at depths of less than two to up to 20 feet. This species inhabits medium to small sized streams or in main channel of large rivers (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	No Comment
Deertoe	<i>Truncilla truncate</i>	SC	Yes	Yes	This species is a generalist in terms of substrate preference, usually occurring in fine gravel mixed with sand and mud. This species is more commonly found in medium sized rivers but may occur in large rivers as well (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	No Comment
Mammals								
Indiana bat	<i>Myotis sodalis</i>	E	Yes	No	The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas; Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007; USFWS 2020b). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves	No	No suitable winter hibernacula or summer foraging and roosting habitat were observed in the Project area.	The Project is in the range of the Indiana bat. If suitable habitat occurs within the Project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. If no

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					for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).			tree removal is proposed, this Project is not likely to impact this species.
Northern Long-eared bat	<i>Myotis septentrionalis</i>	T	Yes	No	The northern long-eared bat is found throughout Ohio. This species generally forages in forested habitat and openings in forested habitat and utilizes cracks, cavities, and loose bark within live and dead trees, as well as buildings as roosting habitat (Brack et al. 2010; USFWS 2020a). The species utilizes caves and abandoned mines as winter hibernacula. Various sized caves are used providing they have a constant temperature, high humidity, and little to no air current (Brack et al. 2010).	No	No suitable winter hibernacula or summer foraging and roosting habitat were observed in the Project area.	No comment

¹E=Endangered; T=Threatened; SC=Species of Concern
²According to Ohio Department of Natural Resources, State Listed Wildlife Species by County (ODNR Division of Wildlife 2020a).
³According to Ohio Natural Heritage Program (Appendix B)

Results
May 11, 2020

Table 3. Summary of Potential Federally-Listed Species within the Lockbourne 138kV Station Project Area, Pickaway County, Ohio

Common Name	Scientific Name	Federal Status ^{1, 2}	Known to Occur in Pickaway County?	Habitat Preference	Habitat Observed in Project Area?	Impact Assessment	USFWS Comments/ Recommendations
Mammals							
Indiana Bat	<i>Myotis sodalis</i>	E	Yes	The Indiana bat is likely distributed over the entire state of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas. Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007; USFWS 2020b). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).	No	No suitable winter hibernacula or summer foraging and roosting habitat were observed in the Project area.	Should the proposed Project site contain trees ≥3 inches dbh, USFWS recommend avoiding tree removal wherever possible. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, USFWS recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31 to avoid adverse effects to Indiana bats. If implementing this seasonal tree cutting recommendations is not possible, a summer presence/absence survey may be conducted for Indiana bats.
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	T	Yes	The northern long-eared bat is found throughout Ohio. This species generally forages in forested habitat and openings in forested habitat and utilizes cracks, cavities, and loose bark within live and dead trees, as well as buildings as roosting habitat (Brack et al. 2010; USFWS 2020a). The species utilizes caves and abandoned mines as winter hibernacula. Various sized caves are used providing they have a constant temperature, high humidity, and little to no air current (Brack et al. 2010).	No	No suitable winter hibernacula or summer foraging and roosting habitat were observed in the Project area.	Should the proposed Project site contain trees ≥3 inches dbh, USFWS recommend avoiding tree removal wherever possible. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, USFWS recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31 to avoid adverse effects to northern long-eared bats.
Mussels							
Clubshell	<i>Pleurobema clava</i>	E	Yes	Clubshell is found in small to medium rivers, but occasionally found in large rivers, especially those having large shoal areas. It is generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle and cannot tolerate mud or slackwater conditions (USFWS 1994). Badra (2001) found the clubshell in gravel/sand substrate, runs having laminar flow (0.06-0.25 m/sec) within small to medium sized streams.	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	Due to the Project type, size, and location, USFWS does not anticipate adverse effects to this species.
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	E	Yes	This mussel is found in a wide variety of streams from small to large (USFWS 2019c). Habitat for this species includes riffles and firmly packed substrates of fine to coarse gravel. This mussel needs highly oxygenated water (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	Due to the Project type, size, and location, USFWS does not anticipate adverse effects to this species.

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Common Name	Scientific Name	Federal Status ^{1, 2}	Known to Occur in Pickaway County?	Habitat Preference	Habitat Observed in Project Area?	Impact Assessment	USFWS Comments/ Recommendations
Rayed Bean	<i>Villosa fabalis</i>	E	Yes	Habitat includes gravel or sandy substrate, especially in areas of thick roots of aquatic plants, increase substrate stability (Butler 2002, Parmalee and Bogan 1998). Rayed bean can be associated with shoal or riffle areas, and in shallow, wave-washed areas of glacial lakes. It is generally found in smaller, headwater creeks, but sometimes in larger rivers and open-water bodies. It can occur in shallow riffles or in lakes with water depths up to four feet. It has been found in riffles, generally in vegetation, and deeply buried in sand and gravel bound together by roots (Parmalee and Bogan 1998).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	Due to the Project type, size, and location, USFWS does not anticipate adverse effects to this species.
Snuffbox	<i>Epioblasma triquetra</i>	E	Yes	Snuffbox is found buried in riffles of small and medium creeks, in large rivers, and in shoals and wave-washed shores of lakes. Except when spawning, adults are usually burrowed deep in sand, gravel, or cobble substrates (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	Due to the Project type, size, and location, USFWS does not anticipate adverse effects to this species.
Rabbitsfoot	<i>Quadrula cylindrica cylindrica</i>	T	Yes	The typical habitat for this species is small to medium rivers with moderate to swift currents, and in smaller streams it inhabits bars or gravel and cobble close to the fast current. Found in medium to large rivers in sand and gravel shoals (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	Due to the Project type, size, and location, USFWS does not anticipate adverse effects to this species.
Fish							
Scioto Madtom	<i>Noturus trautmani</i>	E	Yes	This fish prefers tail end of riffles with sand and gravel substrate (ODNR Division of Wildlife 2020b).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	Due to the Project type, size, and location, USFWS does not anticipate adverse effects to this species.
Plants							
Running Buffalo Clover	<i>Trifolium stoloniferum</i>	E	Yes	Running buffalo clover most commonly is mesic woodlands in partial to filtered sunlight, where there is a pattern of moderate periodic disturbance for a prolonged period, such as mowing, trampling, or grazing (NatureServe 2020).	No	No suitable habitat was observed within the Project. Therefore, impacts to this species are not anticipated.	Due to the Project type, size, and location, USFWS does not anticipate adverse effects to this species.

¹E=Endangered; T=Threatened

²According to USFWS (2018).

Conclusions and Recommendations
May 11, 2020

4.0 CONCLUSIONS AND RECOMMENDATIONS

Stantec conducted a wetland and waterbodies delineation and a preliminary habitat assessment for threatened and endangered species within the Project area on April 20, 2020. During the field surveys, no wetlands or streams were observed within the Project area.

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

An ODNR Ohio Natural Heritage Program data request and environmental review request letter was sent to the ODNR Office of Real Estate on March 4, 2020. The ODNR Office of Real Estate response dated April 27, 2020, stated the Natural Heritage Database has the following records at or within a one-mile radius of the Project area: state-listed endangered elephant-ear, washboard, rabbitsfoot, and rayed bean; state-listed threatened black sandshell, fawnsfoot, and Tiptecanoe darter; and state-listed species of concern elktoe (*Alasmidonata marginata*), purple wartyback (*Cyclonaias tuberculata*), and deertoe (*Truncilla truncata*).

The ODNR Division of Wildlife (DOW) stated that the Project area is within the range of the Indiana bat. If suitable habitat occurs within the Project area, DOW recommends trees be conserved. If suitable habitat occurs within the Project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. If no tree removal is proposed, the Project is not likely to impact this species. No winter hibernacula or summer roost habitat were observed within the Project area during the field surveys.

According to the ODNR response letter, the Project is within the range of the state-listed endangered purple cat's paw, snuffbox, clubshell, fanshell, northern riffleshell, rayed bean, rabbitsfoot, washboard, butterfly, long-solid, ebonyshell, sharp-ridged pocketbook, pyramid pigtoe, Ohio pigtoe, elephant-ear, and the state-listed threatened threeshorn wartyback, fawnsfoot, pondhorn, and black sandshell. However, due to the location, and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact these species.

The ODNR response also stated that the Project is within the range of the state-listed endangered Scioto madtom, spotted darter, northern brook lamprey, northern madtom, goldeye, shortnose gar, and the state-listed threatened Tiptecanoe darter, paddlefish, bigeye shiner, and the lake chubsucker. However, due to the location, and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact these species.

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May 11, 2020

The ODNR also stated that the Project is within the range of the state-listed endangered upland sandpiper. If any preferred nesting habitat for this species (dry grasslands, native grasslands, seeded grasslands, grazed and ungrazed pastures, hayfields, and grasslands) will be impacted, construction should be avoided during the species' nesting period (April 15 to July 31). If preferred nesting habitat will not be impacted, this Project is not likely to impact this species.

A technical assistance request letter was also submitted to the USFWS on March 4, 2020. The USFWS response letter dated March 20, 2020 states the USFWS recommends that proposed developments avoid and minimize project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. Best management practices should be utilized to minimize erosion, especially on slopes.

According to the USFWS response (Appendix B), all projects in the State of Ohio lie within range of the federally endangered Indiana bat and the federally threatened northern long-eared bat. In Ohio presence of these species are assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. The USFWS response letter stated that should the Project site contain trees ≥ 3 inches diameter at breast height (dbh), the USFWS recommends avoiding tree removal whenever possible. If any caves or abandoned mines may be disturbed, further coordination is requested. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, the USFWS recommends that removal of trees ≥ 3 inches dbh only occur between October 1 and March 31 in order to avoid adverse effects to these species. If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. No hibernacula for these species were observed within the Project area. The Project area does not contain potentially suitable roosting or foraging habitat for the Indiana bat and northern long-eared bat.

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

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References
May 11, 2020

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May 11, 2020

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Figures
May 11, 2020

Appendix A **FIGURES**

A.1 **FIGURE 1 – PROJECT LOCATION MAP**

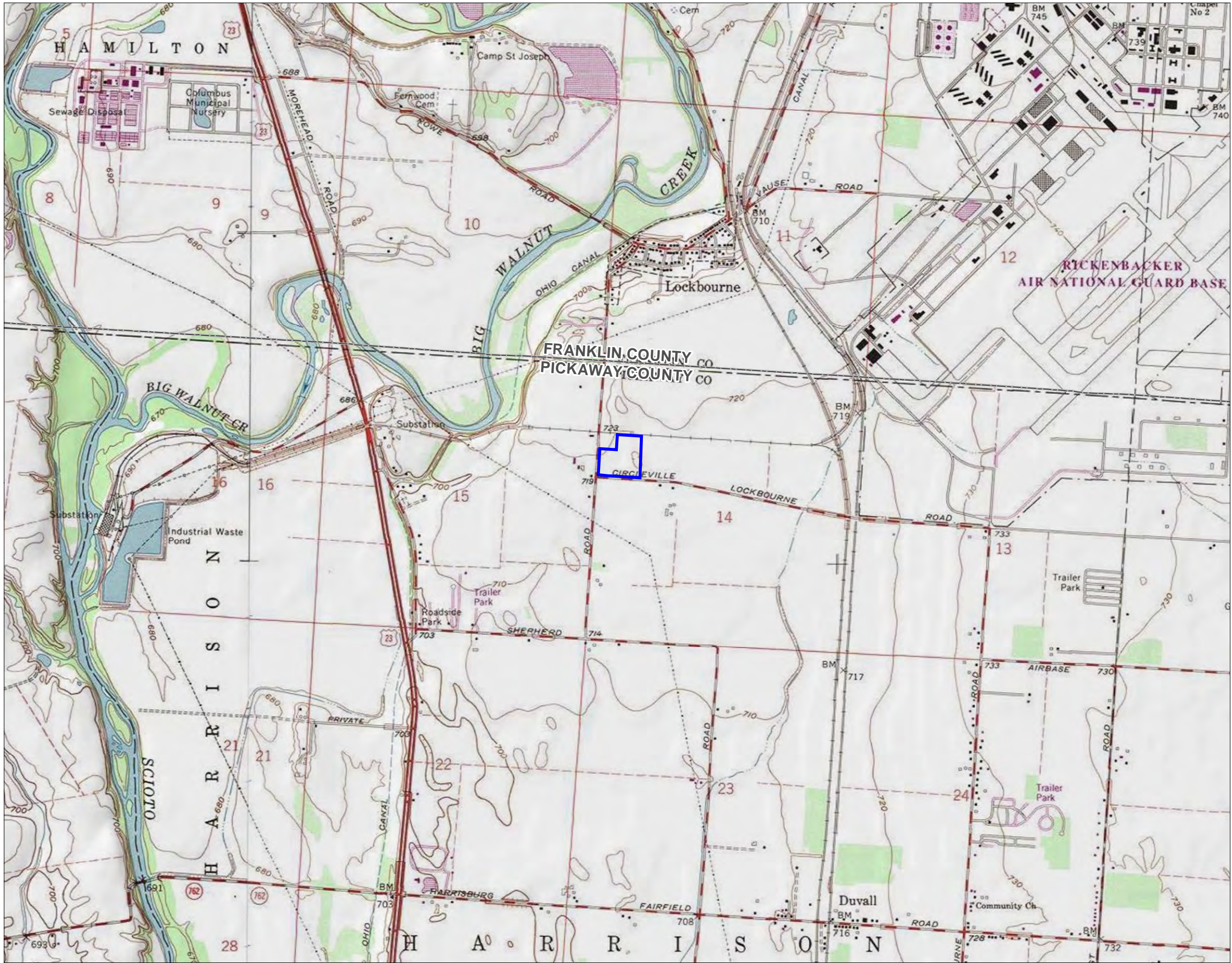
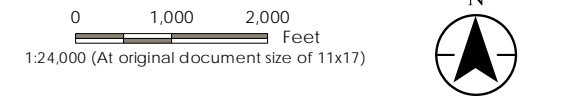


Figure No. 1
Title Project Location Map

Client/Project
AEP Ohio Transmission Company, Inc.
Lockbourne 138 kV Station Project

Project Location 193707438
Pickaway County, Ohio Prepared by JH on 2020-04-22
Technical Review by MK on 2020-05-08
Independent Review by AS on 2020-05-11



Legend
Project Area



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources Include: Stantec, AEP, USGS, NADS
3. Background: USGS 7.5 Topographic Quadrangles - Lockbourne, OH (1985)



Figures
May 11, 2020

A.2 FIGURE 2 – WETLAND AND WATERBODY DELINEATION MAP



Figure No.
2

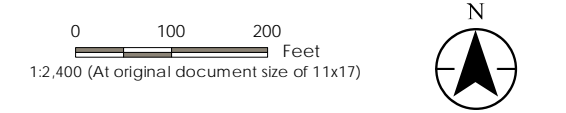
Title
Wetland and Waterbody
Delineation Map

Client/Project
AEP Ohio Transmission Company, Inc.
Lockbourne 138 kV Station Project

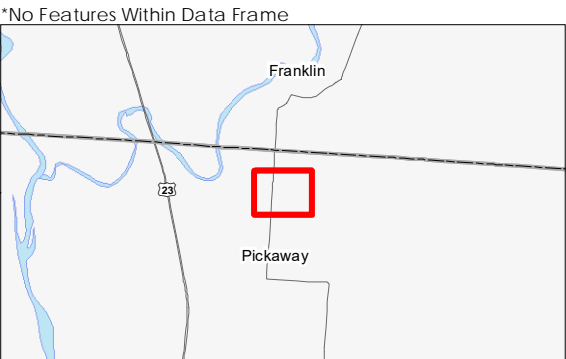
Project Location
Pickaway County, Ohio

193707438

Prepared by J.L.H. on 2020-04-22
Technical Review by M.K. on 2020-05-08
Independent Review by A.S. on 2020-05-11



- Legend
- Project Area
 - Photo Location
 - FEMA Flood Hazard Area*
 - 100-year Flood Zone
 - 100-year Floodway



Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
- Data Sources Include: Stantec, AEP, USGS, FEMA, OGRIP, NADS
- Orthophotography: 2019 NAIP



Figures
May 11, 2020

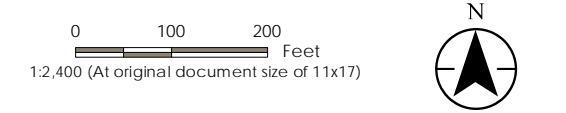
A.3 FIGURE 3 – HABITAT ASSESSMENT MAP



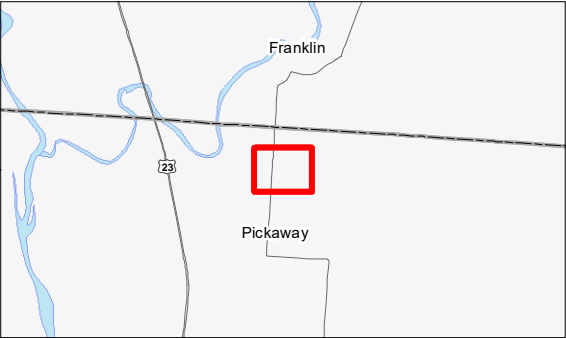
Figure No.
3
Title
Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc.
Lockbourne 138 kV Station Project

Project Location
Pickaway County, Ohio
193707438
Prepared by J.L.H. on 2020-04-22
Technical Review by M.K. on 2020-05-08
Independent Review by A.S. on 2020-05-11



- Legend
- Project Area
 - Photo Location
 - Habitat Area
 - Agricultural Field
 - Industrial



Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
- Data Sources Include: Stantec, AEP, USGS, OGRIP, NADS
- Orthophotography: 2019 NAIP



Agency Correspondence
May 11, 2020

Appendix B **AGENCY CORRESPONDENCE**



Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate

John Kessler, Chief

2045 Morse Road – Bldg. E-2

Columbus, OH 43229

Phone: (614) 265-6621

Fax: (614) 267-4764

April 27, 2020

Matt Teitt
Stantec Consulting Services, Inc.
11687 Lebanon Road
Cincinnati, Ohio 45241

Re: 20-285; American Electric Power (AEP) Lockbourne Station and Line Extension

Project: The proposed project involves the construction of a 0.25-mile extension of the 138-kV line within a new right-of-way on the south side of the station.

Location: The proposed project is located in Harrison Township, Pickaway County, Ohio.

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

Natural Heritage Database: The Natural Heritage Database has the following records at or within a one-mile radius of the project area:

Elktoe (*Alasmodonta marginata*), SC
Purple wartyback (*Cyclonaias tuberculata*), SC
Elephant-ear (*Elliptio crassidens*), E
Black sandshell (*Ligumia recta*), T
Washboard (*Megalonaias nervosa*), E
Rabbitsfoot (*Theliderma cylindrical*), E, FT
Fawnsfoot (*Truncilla donaciformis*), T
Deertoe (*Truncilla truncate*), SC
Rayed bean (*Villosa fabalis*), E, FE
Tippecanoe darter (*Etheostoma tippecanoe*), T

The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity.

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

rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; A = species recently added to state inventory, status not yet determined; X = presumed extirpated in Ohio; FE = federal endangered, FT = federal threatened, FSC = federal species of concern, FC = federal candidate species.

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

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

The project is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees to include: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the purple cat's paw (*Epioblasma o. obliquata*), a state endangered and federally endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, the clubshell (*Pleurobema clava*), a state endangered and federally endangered mussel, the fanshell (*Cyprogenia stegaria*), a state endangered and federally endangered mussel, the northern riffleshell (*Epioblasma torulosa rangiana*), a state endangered and federally endangered mussel, the rayed bean (*Villosa fabalis*), a state endangered and federally endangered mussel, the rabbitsfoot (*Quadrula cylindrica cylindrica*), a state endangered and federal candidate mussel, the washboard (*Megalonaias nervosa*), a state endangered mussel, the butterfly (*Ellipsaria lineolata*), a state endangered mussel, the long-solid (*Fusconaia maculata maculata*), a state endangered mussel, the ebonyshell (*Fusconaia ebenus*), a state endangered mussel, the sharp-ridged pocketbook (*Lampsilis ovata*), a state endangered mussel, the pyramid pigtoe (*Pleurobema rubrum*), a state endangered mussel, the Ohio pigtoe (*Pleurobema cordatum*), a state endangered mussel, the elephant-ear (*Elliptio crassidens*), a state endangered mussel, the threehorn wartyback (*Obliquaria reflexa*), a state threatened mussel, the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel, the pondhorn (*Unio merus tetralasmus*), a state threatened mussel, and the black sandshell (*Ligumia recta*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the Scioto madtom (*Noturus trautmani*), a state endangered and federally endangered fish, the spotted darter (*Etheostoma maculatum*), a state endangered fish and a federal species of concern, the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, the northern madtom (*Noturus stigmosus*), a state endangered fish, the goldeye (*Hiodon alosoides*), a state endangered fish, the shortnose gar (*Lepisosteus platostomus*), a state endangered fish, the Tippecanoe darter (*Etheostoma tippecanoe*), a state threatened fish, the paddlefish (*Polyodon spathula*), a state threatened fish, the bigeye shiner (*Notropis boops*), a state threatened fish, and the lake chubsucker (*Erimyzon sucetta*), a state threatened fish. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

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

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

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

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

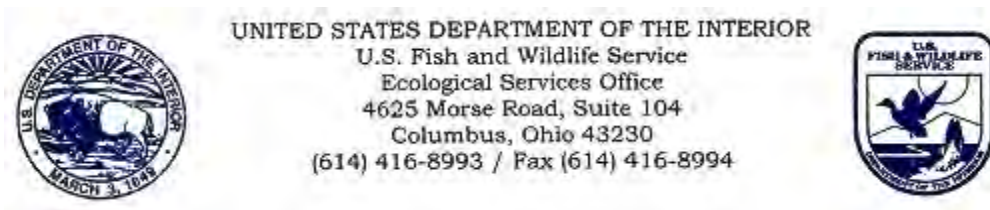
ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at (614) 265-6397 or Sarah.Tebbe@dnr.state.oh.us if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

From: [Teitt, Matthew](#)
To: [Kearns, Michelle](#)
Subject: FW: American Electric Power Lockbourne Station and Line Extension Project
Date: Friday, March 20, 2020 12:34:19 PM
Attachments: [pastedImagebase640.png](#)
[image001.png](#)

FYI

From: Boyer, Angela <angela_boyer@fws.gov>
Sent: Friday, March 20, 2020 12:00 PM
To: Teitt, Matthew <Matthew.Teitt@stantec.com>
Cc: Ohio, FW3 <ohio@fws.gov>; amcross@aep.com; ajtoohey@aep.com;
nathan.reardon@dnr.state.oh.us; Kate Parsons <kate.parsons@dnr.state.oh.us>
Subject: American Electric Power Lockbourne Station and Line Extension Project



TAILS# 03E15000-2020-TA-0968

Dear Mr. Teitt:

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

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

forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

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

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

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

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf).

We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize

erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

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

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact 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 ohio@fws.gov.

Sincerely,



Patrice Ashfield
Field Office Supervisor

LOCKBOURNE 138 KV STATION PROJECT, PICKAWAY COUNTY, OHIO, ECOLOGICAL RESOURCES INVENTORY
REPORT

Representative Photographs
May 11, 2020

Appendix C REPRESENTATIVE PHOTOGRAPHS

AEP Ohio Transmission Company, Inc.
Lockbourne Station 138 kV Project
Pickaway County, Ohio



Photo Location 1. View of agricultural field habitat. Photograph taken facing east.



Photo Location 1. View of agricultural field habitat and industrial habitat (outside Project area).
Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
Lockbourne Station 138 kV Project
Pickaway County, Ohio



Photo Location 2. View of agricultural field habitat. Photograph taken facing west.



Photo Location 3. View of industrial habitat. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
Lockbourne Station 138 kV Project
Pickaway County, Ohio



Photo Location 4. View of industrial habitat. Photograph taken facing northeast.

This foregoing document was electronically filed with the Public Utilities

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Case No(s). 20-0952-EL-BLN

Summary: Notice Letter of Notification Application for the Lockbourne 138 kV Station Project electronically filed by Tanner Wolfram on behalf of AEP Ohio Transmission Company, Inc.