

Letter of Notification for the South Canton 765kV Transmission Station Expansion Project



Case No. 20-1026-EL-BLN

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

Submitted by:
Ohio Power Company

May 26, 2020

LETTER OF NOTIFICATION FOR THE SOUTH CANTON 765KV TRANSMISSION STATION EXPANSION PROJECT

Letter of Notification

**Ohio Power Company's South
Canton 765kV Transmission Station Expansion Project**

4906-6-05

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

4906-6-05(B) General Information

B(1) Project Description

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

The Company proposes the South Canton 765kV Transmission Station Expansion ("Project"), located in Canton, Stark County, Ohio. The purpose of this Project is to expand the South Canton Station by more than 20 percent to add equipment and infrastructure necessary to satisfy the Company's current resiliency, operational performance, safety, and reliability standards. The Project will be constructed on existing Ohio Power Company property. Appendix A shows the location of the Project.

The Project meets the requirements for a Letter of Notification ("LON") because it is within the types of projects defined by (4)(a) of Appendix A to Ohio Adm.Code. 4906-1-01, *Application Requirement Matrix for Electric Power Transmission Lines*:

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

b. There is a greater than twenty percent expansion of the fenced area.

The Project has been assigned PUCO Case No. 20-1026-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.

Ohio Adm.Code 4906-6-05(B)(2) applies only to electric power, gas, and natural gas transmission lines and is not applicable to this station expansion project. Nonetheless, this Project is necessary to enable the Company to add equipment and infrastructure that will bring the South Canton 765kV Station up to current resiliency, safety, operational performance, and reliability standards.

Because this Project results in no operational, modeling, or topology change, the Project will not be included in the PJM Regional Transmission Expansion Plan. This Project is also not included in Form FE-T10 of AEP Ohio's or AEP Ohio Transco's 2019 Long-Term Forecast Reports because South Canton 765kV Station is an existing substation. South Canton 765kV Station was included as an existing substation in AEP Ohio's 2020 Form FE-T8, on page 82 of 119.

LETTER OF NOTIFICATION FOR THE SOUTH CANTON 765KV TRANSMISSION STATION EXPANSION PROJECT

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.

This Project is located in Canton, Stark County, Ohio. Appendix A shows the location of the Project in relation to existing assets.

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.

Based on the scope of the Project, the expansion to the existing station fence, and the location of the Project on existing AEP Ohio property, the Project represents the most suitable and least-impactful alternative. Therefore, there were no other alternatives considered for this Project. Socioeconomic, land use, and ecological information is presented in Section B(10).

B(5) Public Information Program

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

The Company informs affected property owners and tenants about its projects through several different mediums. Within seven days of filing this LON, the Company will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements under O.A.C. Section 4906-6-08(A)(1-6). Further, the Company mailed a letter, via first class mail, to affected landowners, tenants, contiguous owners, and any other landowner the Company approached for an easement necessary for the construction, operation, or maintenance of the facility. The letter complies with all the requirements of O.A.C. Section 4906-6-08(B). The Company also maintains a website (<http://aeptransmission.com/ohio/>) which 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 affected by this proposed Project. Lastly, the Company retains ROW land agents who discuss project timelines, construction and restoration activities with affected owners and tenants.

B(6) Construction Schedule

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

The Company anticipates that construction of the Project will begin in the third quarter of 2020. The anticipated in-service date for the Project is June 2022.

B(7) Area Map

LETTER OF NOTIFICATION FOR THE SOUTH CANTON 765KV TRANSMISSION STATION EXPANSION PROJECT

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.

From Columbus, get on I-670 East from South 4th Street (1.2 miles). Then follow I-71 North and US-30 E to OH-627 E/Richville Dr SW in Perry Township. Then Take the OH-627/Richville Dr exit from US-30 E (120 miles). Continue on Richville Dr SW and then take 252/Fohl St SW to Keiffer Ave SW in Pike Township (5.9 miles). The destination should be on the right.

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 property owned by the Company. No other property easements, options, or land use agreements are necessary to construct the Project or operate the substation.

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.

South Canton 765kV's station operating characteristics will not change as a result of this Project. There will be no transmission line shifts as a part of this overall project.

B(9)(b) Electric and Magnetic Fields

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

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

B(9)(c) Project Cost

The estimated capital cost of the project.

The capital cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately \$5,525,838

LETTER OF NOTIFICATION FOR THE SOUTH CANTON 765KV TRANSMISSION STATION EXPANSION PROJECT

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 entirely within the Company's property in Canton, Stark County, Ohio. The Stark County Auditor lists the land use of this area as "800- Agricultural Land/Improvements". Approximately 0.2 acres of tree clearing is anticipated to be required for the Project. No environmental or cultural resources are expected to be impacted as a result of this Project.

B(10)(b) Agricultural Land Information

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

The Project area is entirely within Ohio Power Company property, with surrounding industrial/commercial and residential facilities, and is noted within the Stark County Auditor's website as agricultural use.

B(10)(c) Archaeological and Cultural Resources

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

A cultural report was completed and will be coordinated directly with the OPSB.

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.

Coordination with the State Historic Preservation Office, United States Fish and Wildlife Service ("USFWS"), and the Ohio Department of Natural Resources ("ODNR") has been completed and coordination letters can be found in Appendix C.

LETTER OF NOTIFICATION FOR THE SOUTH CANTON 765KV TRANSMISSION STATION EXPANSION 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 Company has coordinated with USFWS and ODNR regarding special status species within the vicinity of the Project. No impacts are expected to such species as a result of this Project. Copies of the coordination letters are included as Appendix C.

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.

An Ecological Resources Inventory Report was completed by the Company's consultants within the Project Area and is included as Appendix B. There are no streams impacted by the proposed Project. No wetland impacts are expected to occur.

B(10)(g) Unusual Conditions

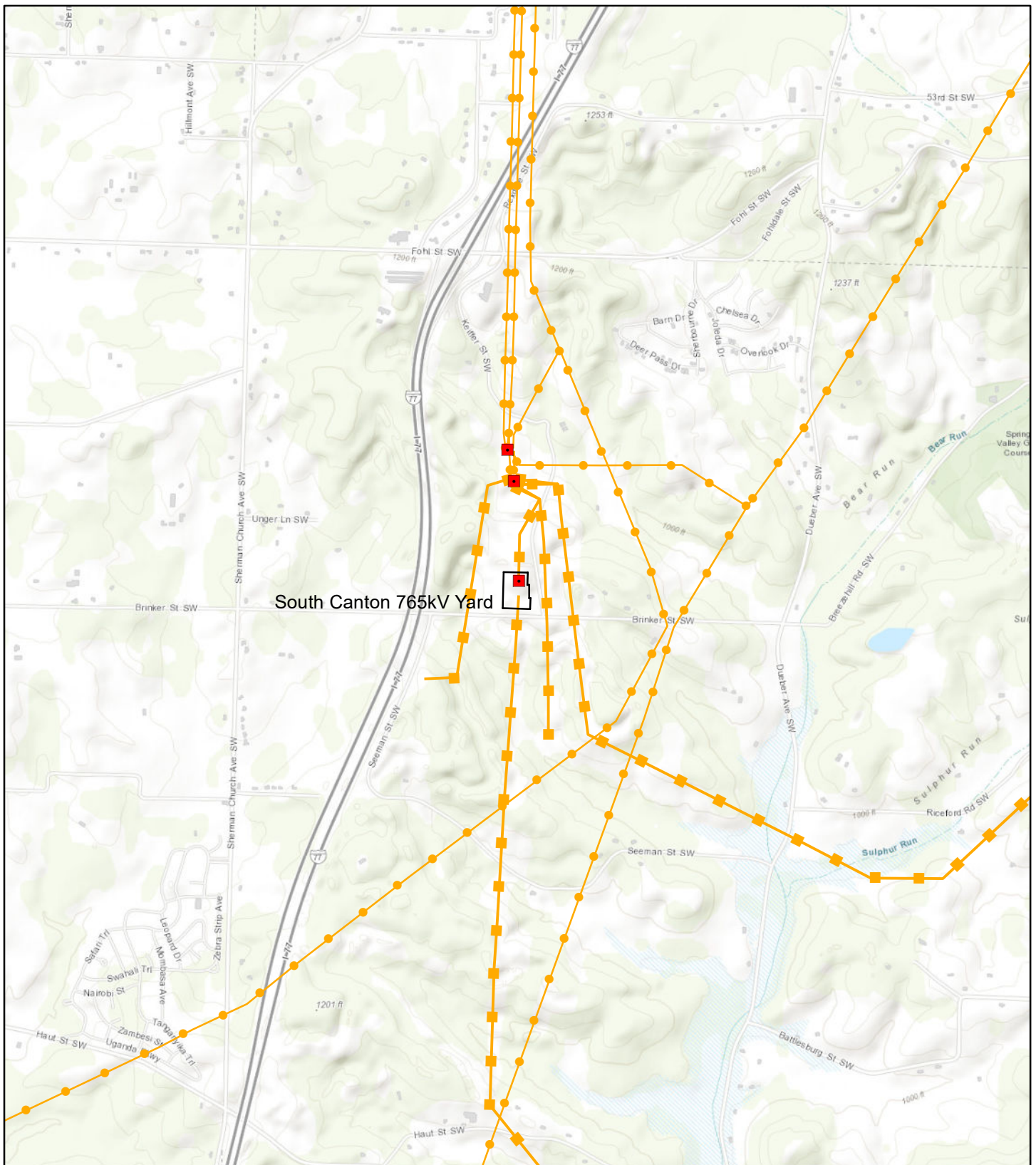
Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

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

**LETTER OF NOTIFICATION FOR THE SOUTH CANTON 765KV TRANSMISSION STATION EXPANSION
PROJECT**

APPENDIX A

Figure 1



Legend

- Substations
- Existing Lines
- Station Fence

South Canton 765kV Station Site Hardening

March 12, 2020



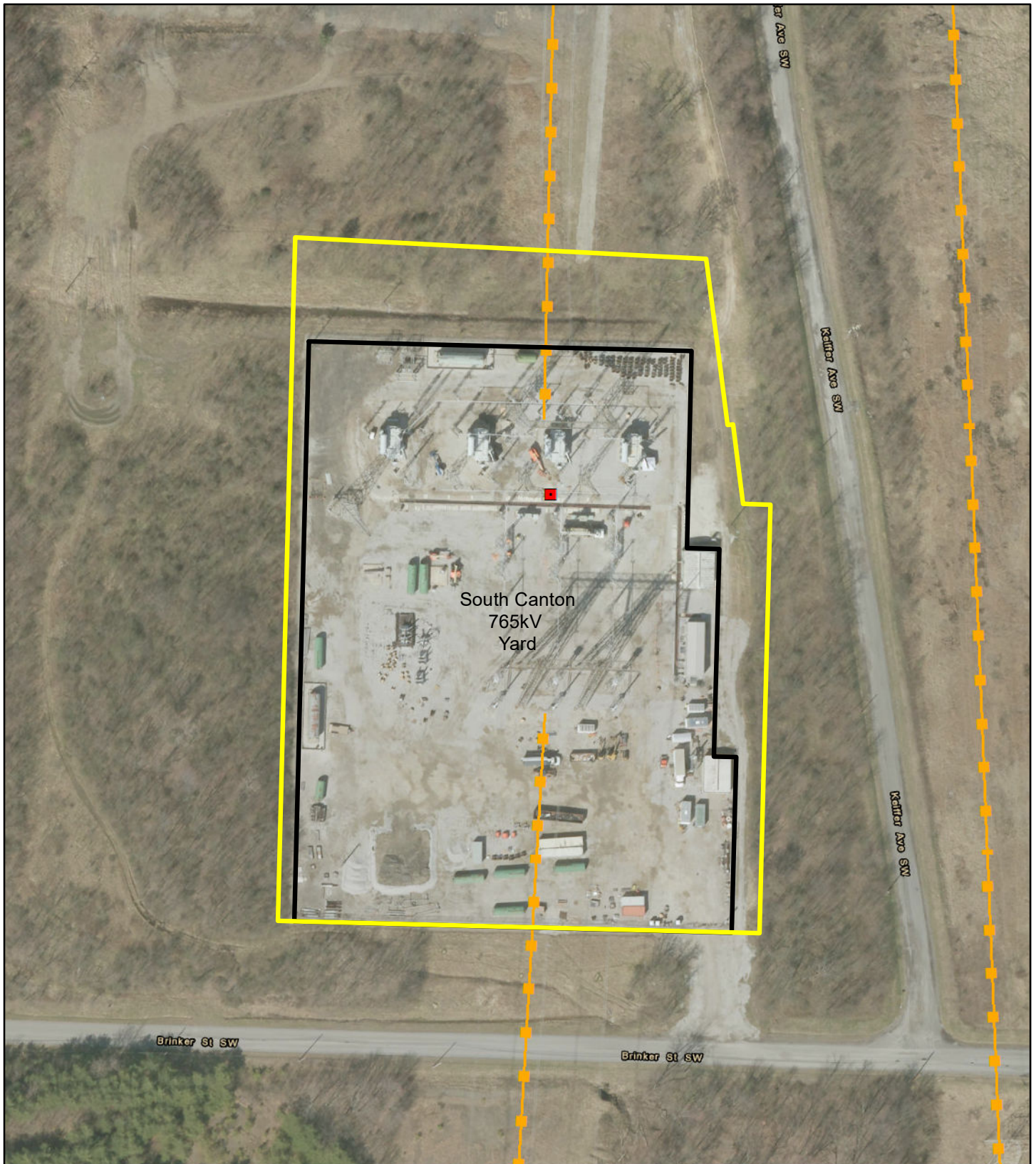
Figure 1



0 0.125 0.25 0.5
Miles

LETTER OF NOTIFICATION FOR THE SOUTH CANTON 765KV TRANSMISSION STATION EXPANSION
PROJECT

Figure 2



Legend

- Substations
- Existing Lines
- Existing Fence Line
- Areas Where Existing Fence is Moving Out

South Canton 765kV Station Site Hardening

April 22, 2020



Figure 2



0 37.5 75 150
Feet

**LETTER OF NOTIFICATION FOR THE SOUTH CANTON 765KV TRANSMISSION STATION EXPANSION
PROJECT**

Appendix B Wetland Delineation and Stream Assessment Report

**LETTER OF NOTIFICATION FOR THE SOUTH CANTON 765KV TRANSMISSION STATION EXPANSION
PROJECT**

Ohio Power Company

May 26, 2020

South Canton 765kV Transmission Station Expansion
Project

20-1026-EL-BLN

Ecological Survey Report

AEP Ohio Transmission Company
South Canton 765kV Station Security Project
Stark County, Ohio

GAI Project Number: C170352.24, Task 001

January 2019



Prepared by: GAI Consultants, Inc.
Canton Office
3720 Dressler Road Northwest
Canton, Ohio 15120-2700

Prepared for: American Electric Power Service Corporation
1 Riverside Place
22nd Floor
Columbus, Ohio 43215-2373

Ecological Survey Report

AEP Ohio Transmission Company
South Canton 765kV Station Security Project
Stark County, Ohio

GAI Project Number: C170352.24, Task 001

January 2019

Prepared for:
American Electric Power Service Corporation
1 Riverside Place
22nd Floor
Columbus, Ohio 43215-2373

Prepared by:
GAI Consultants, Inc.
Canton Office
3720 Dressler Road Northwest
Canton, Ohio 44718

Report Authors:

Rita E. Zack
Project Environmental Specialist

Joshua J. Noble, MS
Environmental Manager

Table of Contents

| | | |
|------------|--|---|
| 1.0 | Introduction | 1 |
| 2.0 | Methods | 1 |
| 2.1 | Wetlands..... | 1 |
| 2.1.1 | Preliminary Data Gathering..... | 1 |
| 2.1.2 | Onsite Inspection..... | 2 |
| 2.2 | Waterbodies | 3 |
| 2.2.1 | Preliminary Data Gathering..... | 3 |
| 2.2.2 | Onsite Inspection..... | 3 |
| 2.3 | Rare, Threatened, and Endangered Species..... | 4 |
| 2.3.1 | Preliminary Data Gathering..... | 4 |
| 2.3.2 | Onsite Inspection..... | 4 |
| 3.0 | Results | 4 |
| 3.1 | Wetlands..... | 4 |
| 3.1.1 | Preliminary Data Gathering..... | 4 |
| 3.1.2 | Onsite Inspection..... | 4 |
| 3.1.3 | Regulatory Discussion | 4 |
| 3.2 | Waterbodies | 5 |
| 3.2.1 | Preliminary Data Gathering..... | 5 |
| 3.2.2 | Onsite Inspection..... | 5 |
| 3.2.3 | Regulatory Discussion | 5 |
| 3.3 | Rare, Threatened, and Endangered Species..... | 6 |
| 3.3.1 | Preliminary Data Gathering..... | 6 |
| 3.3.2 | Onsite Inspection..... | 6 |
| 3.3.3 | Regulatory Discussion | 6 |
| 4.0 | Conclusions..... | 7 |
| 5.0 | References..... | 8 |
| Table 1 | Wetlands Identified Within the Project Study Area | |
| Table 2 | Waterbodies Identified Within the Project Study Area | |
| Table 3 | ODNR and USFWS RTE Species and Critical Habitat Review Results | |
| Figure 1 | Project Location Map | |
| Figure 2 | Resource Location Map | |
| Figure 3 | Ohio EPA Stream Eligibility Map | |
| Appendix A | Photographs | |
| Appendix B | Wetland Determination Data Forms | |
| Appendix C | Primary Headwater Habitat Evaluation (HHEI) Data Forms | |
| Appendix D | Ohio Rapid Assessment Method for Wetlands (ORAM) Data Forms | |
| Appendix E | ODNR and USFWS Correspondence | |

1.0 Introduction

GAI Consultants, Inc. (GAI), on behalf of American Electric Power Ohio Transmission Company (AEP), completed an ecological survey for the South Canton 765kV Station Security Project (Project) located in Stark County, Ohio (OH). The Project involves the installation of a new security fence surrounding the South Canton 765kV Station.

Ecological surveys were conducted on September 7-8 and 11-13, 2017. The study area consisted of an approximately 185 acre parcel surrounding the Project area, as shown on Figure 1.

The Project study area is located within the Beal Run-Sandy Creek (United States Geological Survey [USGS] Hydrologic Unit Code [HUC] #050400010607) and Wolf Creek – Tuscarawas River (USGS HUC #040400011203) watersheds.

This report details the results of the ecological surveys regarding the existence of aquatic resources within the Project area (Figure 2). The United States Army Corps of Engineers (USACE) Wetland Determination Data Forms are provided in Appendix B. Ohio Environmental Protection Agency (OEPA) Primary Headwater Habitat Evaluation (HHEI) Data Forms are provided in Appendix C and Ohio Rapid Assessment Method for Wetlands (ORAM) Data Forms are provided in Appendix D.

2.0 Methods

2.1 Wetlands

The 1987 USACE *Corps of Engineers Wetlands Delineation Manual* (Wetlands Delineation Manual) (USACE, 1987) and the 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0* (Regional Supplement) (USACE, 2012) describe the methods used to identify and delineate wetlands that fall under the jurisdiction of the USACE. This approach recognizes the three (3) parameters of wetland hydrology, hydrophytic vegetation, and hydric soils to identify and delineate wetland boundaries. In accordance with the Wetlands Delineation Manual and Regional Supplement, GAI completed preliminary data gathering and on-site inspections.

2.1.1 Preliminary Data Gathering

The preliminary data gathering is used to compile and review information that may be helpful in identifying wetlands and/or areas that warrant further inspection during the investigation. The preliminary data gathering includes a review of the following:

- ▶ USGS 7.5-minute topographic mapping for Bolivar (USGS, 1978), OH (Figure 1);
- ▶ United States Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI) mapping (USFWS, 2015) (Figure 2);
- ▶ Federal Emergency Management Agency (FEMA), National Flood Hazard Layer (FEMA, 2015) (Figure 2); and
- ▶ United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS, 2015) soil mapping (Figure 2).

Topographic mapping is used to identify mapped streams and the overall shape of the landscape in the Project area to determine potential locations for wetlands, such as floodplains and depressions. NWI mapping is used to determine locations where probable wetlands are located based on infrared photography. Soil mapping is reviewed to determine the location and extent of mapped hydric soils that have a high probability of containing wetlands.

2.1.2 Onsite Inspection

The methodology described in the Regional Supplement identifies areas meeting the definition of a wetland by evaluating three parameters: hydrology, vegetation, and soil. During the on-site inspection, GAI staff traversed the Project study area on foot to determine if any indicators of wetlands were present. When indicators of wetlands were observed, an observation point was established, and a Wetland Determination Data Form (Data Form) was completed to determine if all three wetland indicators were present.

The presence of wetland hydrology is determined by examining the observation point for primary and secondary indicators of wetland hydrology. The presence of any primary indicator signifies the presence of wetland hydrology, or the presence of two (2) or more secondary indicators signifies the presence of wetland hydrology.

Vegetation is characterized by four (4) different strata. This included trees (woody plants, excluding vines, three inches or more [≥ 3.0 "] in diameter at breast height [DBH]), saplings/shrubs (woody plants, excluding vines, less than three inches [< 3.0 "] DBH and greater than or equal to [\geq] 3.28 feet tall), herbs (non-woody plants, regardless of size, and all other plants less than [$<$] 3.28 feet tall), and woody vines (greater than [$>$] 3.28 feet tall). In general, trees and woody vines are sampled within a thirty-foot (30.0') radius, saplings and shrubs are sampled within a fifteen-foot (15.0') radius, and herbs are sampled within a five-foot (5.0') radius.

When evaluating an area for the presence of hydrophytes, classification of the indicator status of vegetation is based on *The National Wetland Plant List: 2016 Update of Wetland Ratings* (Lichvar et al., 2016). The list of possible indicator statuses for plants is as follows:

- ▶ Obligate Wetland (OBL) - Obligate Wetland plants occur in standing water or in saturated soils;
- ▶ Facultative Wetland (FACW) - Facultative Wetland plants nearly always occur in areas of prolonged flooding or require standing water or saturated soils but may on rare occasions, occur in non-wetlands;
- ▶ Facultative (FAC) - Facultative plants occur in a variety of habitats, including wetland and mesic to xeric non-wetland habitats but often occur in standing water or saturated soils;
- ▶ Facultative Upland (FACU) - Facultative Upland plants typically occur in xeric or mesic non-wetland habitats but may frequently occur in standing water or saturated soils; and,
- ▶ Obligate Upland (UPL) - Obligate Upland plants almost never occur in water or saturated soils.

Presence of hydrophytic vegetation is determined by using a Rapid Test, Dominance Test or Prevalence Index. The Rapid Test finds a vegetation community to be hydrophytic if all dominant species are OBL or FACW. Hydrophytic vegetation is considered present based on the Dominance Test if more than fifty percent (50%) of dominant species are OBL, FACW, or FAC. The Prevalence Index weighs the total percent of vegetation cover based on the indicator status of each plant. Hydrophytic vegetation is considered present when the Prevalence Index is less than or equal to 3.0 (USACE, 2012).

To determine the presence of hydric soils, soil data was collected by digging a minimum sixteen-inch-deep (16.0") soil pit. The soil profile is studied and described, while possible hydric indicators are examined. Soil indicators described in the Wetlands Delineation Manual and Regional Supplement are used to determine the presence of hydric soils. The presence of any of these indicators signifies a hydric soil.

If all three parameters including wetland hydrology, a dominance of hydrophytic vegetation, and hydric soils are identified at a single observation point, the area is determined to be a wetland. Once a wetland is identified, the boundary is delineated.

Wetland boundaries are determined by looking for locations in which one of the three wetland indicators would transition into an upland characteristic. When the transition is identified, a Data Form is completed in the Upland Area. Wetland boundaries are then marked in the field using pink flagging labeled "WETLAND DELINEATION." The locations of the flags are recorded using a Global Positioning System (GPS) unit. Each wetland is codified with a unique identifier indicating the feature type and number (e.g., W001).

Wetlands are then classified using the *Classification of Wetlands and Deepwater Habitats of the United States* as modified for NWI Mapping Convention. This system classifies wetlands based on topographic position and vegetation type. Palustrine system wetlands found within the study area are classified as Palustrine Emergent (PEM), Palustrine Scrub-Shrub (PSS), Palustrine Forested (PFO), or Palustrine Unconsolidated Bottom (PUB) based on aerial coverage of the vegetative community across the extent of the wetland boundary (Cowardin et al., 1979).

2.2 Waterbodies

As with wetlands, Section 404 and 401 of the Clean Water Act (CWA) and state regulations protect waterbodies in OH. Generally, waterbodies are defined as environmental features that have defined beds and banks, ordinary high water mark (OHWM), and contain flowing or standing water for at least a portion of the year.

2.2.1 Preliminary Data Gathering

During the preliminary data gathering, the USGS 7.5-minute topographic mapping is examined for the presence of mapped waterbodies including perennial and intermittent streams. In addition, the topographic mapping is used to identify areas likely to contain unmapped waterbodies including ephemeral streams (USGS, 1978) (Figure 1).

The OEPA 401 Water Quality Certification for Nationwide Permits Stream Eligibility Web Map (OEPA, 2017) is used to determine eligibility coverage under the 401 Water Quality Certification (WQC) for the 2017 Nationwide Permits (NWP). Furthermore, the map is used to identify any ineligible areas that may require a CWA Section 401 individual permit from the OEPA should stream impacts occur within the Project area (OEPA, 2017) (Figure 3).

2.2.2 Onsite Inspection

During the onsite inspection, GAI staff traversed the study area, concurrently with the wetland inspection, and waterbodies were identified. Waterbodies were identified based on the morphological and hydrologic characteristics of the channel and the presence of aquatic macroinvertebrates.

When a waterbody is identified, field measurements are collected. The measurements included top of bank width, top of bank depth, pool depth, water depth, OHWM width, and OHWM depth. A detailed description of substrate composition is also recorded. Waterbodies are then delineated using white flagging marked with the GAI stream code (e.g., S001). The tops-of-bank for streams wider than 10 feet (>10.0') are delineated and the centerline of smaller streams are delineated. The locations of the flags are recorded using a sub-meter capable hand-held GPS unit.

2.3 Rare, Threatened, and Endangered Species

GAI conducted a literature review of potential Rare, Threatened, and Endangered (RTE) species in the vicinity of the Project study area. Potential habitat for RTE species as a result of the literature review was noted during the ecological survey.

2.3.1 Preliminary Data Gathering

A request for review of the Ohio Natural Heritage Database (ONHD) is submitted to the Ohio Department of Natural Resources (ODNR) to determine if any state-listed threatened or endangered species occur within a one-mile radius of the Project area. A request is also submitted to the USFWS Ohio Ecological Services Field Office to determine if any federally-listed threatened or endangered species occur within the vicinity of the Project area.

2.3.2 Onsite Inspection

During the onsite inspection, GAI staff traversed the study area in conjunction with the wetland and waterbody inspections to determine if suitable habitat for state- and/or federally-listed RTE species are present within the study area.

3.0 Results

3.1 Wetlands

3.1.1 Preliminary Data Gathering

Desktop review of available USFWS NWI digital data for the Project revealed six (6) NWI mapped wetlands located within the Project study area. Two (2) NWI wetlands are classified as Palustrine Emergent, Persistent, Seasonally Flooded (PEM1C), one of which corresponds with W006. One (1) NWI wetland is classified as Palustrine, Unconsolidated Bottom, Intermittently Exposed (PUBG) and corresponds to W001. The remaining three (3) NWI wetlands are classified as Palustrine Unconsolidated Bottom, Intermittently Exposed, Excavated (PUBGx) and correspond with W002, W015, and W022 (USFWS, 2017).

According to the USDA-NRCS soil mapping, a total of fourteen (14) soil map units are located within the Project study area (Figure 2). One (1) of the soil map units is classified as hydric (Sebring silt loam [Sb]). None of the remaining soil map units are known to contain hydric inclusions.

3.1.2 Onsite Inspection

Twenty-two (22) wetlands were identified and delineated within the Project study area, including eleven (11) PEM wetlands, one (1) PSS wetland, three (3) PFO wetlands, three (3) PUB wetlands, one (1) PEM/PSS wetland, two (2) PEM/PUB wetlands, and one (1) PFO/PUB wetland.

In order to document site conditions, USACE Data Forms were completed for each wetland and upland reference. Information on the delineated wetlands can be found in Table 1 and photographs of the wetlands are included in Appendix A.

3.1.3 Regulatory Discussion

The USACE guidance divides waterbodies into three groups: Traditionally Navigable Waters (TNWs), non-navigable Relatively Permanent Waters (RPWs), and non-navigable Non-RPWs. TNWs are waterbodies which have been, are, or may be susceptible to use in interstate commerce, including recreational use of the waterbody. RPWs are waterbodies that flow year round, or at a minimum seasonally, by exhibiting continuous flow for at least three consecutive

months, but are not TNWs (USACE, 2007). Non-RPWs are waterbodies that do not flow continuously for at least three (3) consecutive months, are not TNWs or RPWs, but typically exhibit characteristic beds, banks, and OHWM (USACE, 2007).

The status of wetlands is determined partly based on the classification of the waterbody that the wetland is associated with, and the degree of that association. Wetlands that abut or are adjacent to TNWs are jurisdictional. Wetlands that abut RPWs are jurisdictional. Wetlands that are adjacent to RPWs and wetlands that abut or are adjacent to Non-RPWs must be subjected to the Significant Nexus Test (SNT) to determine their jurisdictional status. Generally, the USACE considers wetlands that are isolated, meaning that they are not associated with any other surface water feature, as non-jurisdictional; and wetlands that abut or are adjacent to Non-RPWs as needing further examination by the USACE to determine and verify whether they exhibit a significant nexus to waters of the United States. If these wetlands exhibit a significant nexus, they are jurisdictional; if not, they are not subject to USACE jurisdiction (USACE, 2007).

Wetlands that do not exhibit an association with any surface water are categorized as "isolated" under present USACE guidance and policy (USACE, 2007). These wetlands are regulated by the OEPA Division of Surface Water, and may require an Isolated Wetland Permit.

As regulated by Ohio Administrative Code (OAC) rules 3745-1-50 through 3745-1-54, wetlands were also evaluated using the ORAM to determine the appropriate wetland category. Any wetland score that fell within a gray zone between categories was scored one of two ways. Either the wetland was assigned to the higher of the two categories or it was assessed using a non-rapid method to determine its quality (Mack, 2001). The category assigned to a particular wetland determines the requirement, if any, for additional levels of protection administered by the OEPA.

All wetlands within the study area were identified as jurisdictional. The jurisdictional status provided in Table 1 is the opinion of GAI and must be confirmed by USACE and state agencies through the Jurisdictional Determination (JD) process.

3.2 Waterbodies

3.2.1 Preliminary Data Gathering

Desktop review of the available USGS topographic mapping revealed two previously mapped stream segments located within the Project study area (Figure 1). Desktop review of OEPA's Stream Eligibility Web Map revealed the Project is located within a watershed categorized as "eligible" for automatic 401 WQC coverage (Figure 3).

3.2.2 Onsite Inspection

Fourteen (14) stream segments were identified and delineated within the Project study area. One (1) stream segment was classified as having a perennial flow regime, eleven (11) were classified as intermittent, and two (2) were classified as ephemeral. Information on the delineated waterbodies and their classifications can be found in Table 2, and photographs of the identified streams are included in Appendix A.

3.2.3 Regulatory Discussion

As with wetlands, present USACE guidance and policy determines the jurisdictional status of waterbodies identified during the Project. TNWs and RPWs are jurisdictional. Non-RPWs must be subjected to the SNT by USACE to determine their jurisdictional status. If Non-RPWs exhibit a Significant Nexus, as defined in USACE guidance documents, they are jurisdictional. If not, they do not fall under the jurisdiction of the USACE (USACE, 2007).

Streams are generally defined as environmental features that have defined beds and banks, an OHWM and contain flowing or standing waters for at least a portion of the year (USACE, 2005). Streams were classified as perennial, intermittent, or ephemeral based upon presence of flow, estimated duration of flow, stream bed characteristics, and presence of aquatic biota. The USACE *Jurisdictional Determination Form Instructional Guidebook* (USACE, 2007) was used to determine stream classification and flow status.

As regulated by OAC Chapter 3745-1-24, streams were also assessed according to OEPA guidance using either the HHEI for watersheds less than one square mile ($<1.0 \text{ mi}^2$) in size, or the Qualitative Habitat Evaluation Index (QHEI) for watersheds between one and twenty square miles ($1.0\text{-}20.02 \text{ mi}^2$) in size.

A review of the OEPA Stream Eligibility Web Map confirms that all streams located within the project area are within an eligible area for automatic 401 WQC coverage.

3.3 Rare, Threatened, and Endangered Species

3.3.1 Preliminary Data Gathering

Desktop review of ODNR, Division of Wildlife's Ohio's Listed Species revealed 336 Endangered, Threatened, Species of Concern, and Species of Interest located in OH (ODNR, 2017). Seventeen (17) of the state-listed species are considered federally Endangered, and four (4) are federally threatened.

A review of the USFWS *County Distribution of Federally-Listed Threatened, Endangered, Proposed, and Candidate Species for Ohio* as well as the USFWS Information for Planning and Consultation (IPaC) website revealed two (2) federally endangered or threatened species that may occur within the Project study area (USFWS, 2017). The list of species includes the following:

- ▶ Indiana bat (*Myotis sodalis*) - Endangered; and
- ▶ Northern long-eared bat (*Myotis septentrionalis*) - Threatened;

In addition to the species listed above, there are two (2) species of migratory birds that may occur within the Project study area.

3.3.2 Onsite Inspection

Potential habitat for RTE species was evaluated within the Project study area. In general, the habitat encountered within the study area consisted of mid-successional forest with several intersecting cleared power line rights-of-way. The majority of the project area is former strip mine, portions of which have not been reclaimed. One (1) perennial, eleven (11) intermittent, and two (2) ephemeral streams were also identified within the Project study area.

Representative photographs of the identified habitat types are included in Appendix A.

3.3.3 Regulatory Discussion

State-listed RTE species fall under the jurisdiction of the ODNR, Division of Wildlife, while federally-listed species are covered under Section 7 of the Endangered Species Act. The Bald and Golden Eagle Protection Act and Migratory Bird Act aim to extend protection to certain bird species that fall under the jurisdiction of the USFWS. Based on the desktop review and on-site inspection, informal consultation with the ODNR and USFWS has been initiated to determine if any activities associated with the proposed Project may affect state- and/or federally-listed RTE species. The ODNR and USFWS consultation letters were submitted on September 7, 2017, and are provided in Appendix E. A response from the USFWS was received on September 22, 2017, and is also provided in Appendix E. The ODNR response was received on December 20, 2017 and is also included in Appendix E.

4.0 Conclusions

Ecological surveys were conducted within the Project study area on September 7-8 and 11-13, 2017. Eleven (11) PEM wetlands, one (1) PSS wetland, three (3) PFO wetlands, three (3) PUB wetlands, one (1) PEM/PSS wetland, two (2) PEM/PUB wetlands, and one (1) PFO/PUB wetland were identified within the Project study area. Fourteen (14) stream segments (one perennial, eleven intermittent, and two ephemeral) were also identified within the Project study area. Summaries of the delineated aquatic features are provided in Tables 1 and 2, and a map of their locations is depicted on Figure 2. Photographs of the wetland and stream features are included in Appendix A. Wetland Determination Data Forms documenting the investigation are provided in Appendix B, with HHEI and ORAM Data Forms provided in Appendix C and D, respectively.

The jurisdictional status of these features is considered preliminary and should be confirmed with the USACE and state agencies through the formal JD process.

5.0 References

- Cowardin, D. M., V. Carter, F. C. Golet, and E. T. La Roe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. United States Department of the Interior, Fish and Wildlife Service. Publication No. FWS/OBS 79/31. Washington, D.C.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. United States Department of the Army, United States Army Engineer Waterways Experiment Station. Technical Report Y-87-1. Vicksburg, Mississippi.
- Federal Emergency Management Agency. 2015. National Flood Hazard Layer Web Map Service (WMS). Available from <https://hazards.fema.gov/femaportal/wps/portal/NFHLWMSkmzdownload>.
- Lichvar, R. W., D.L. Banks N. C. Melvin, and W. N. Kirchner. 2016. The National Wetland Plant List: 2016 Update of Wetland Ratings. Phytoneuron 2016-30: 1-17. United States Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, New Hampshire, and BONAP, Chapel Hill, North Carolina. Available from <http://rsgisias.crrel.usace.army.mil/NWPL/>.
- Mack, John J. 2001. Ohio Rapid Assessment Methods for Wetlands Manual for Using Version 5.0. Ohio EPA Technical Bulletin Wetland/2001-1-1. Ohio Environmental Protection Agency, Division of Surface Water, 401 Wetland Ecology Unit, Columbus, Ohio.
- Ohio Administrative Code. 2011. State of Ohio: Water Quality Standards, Chapter 3745-1.
- Ohio Department of Natural Resources, Division of Wildlife. Ohio's Listed Species. <https://wildlife.ohiodnr.gov/portals/wildlife/pdfs/publications/information/pub356.pdf>.
- Ohio Department of Natural Resources, Division of Wildlife. State-Listed Species by County. <http://wildlife.ohiodnr.gov/species-and-habitats/state-listed-species/state-listed-species-by-county>.
- Ohio Environmental Protection Agency. 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI). Ohio EPA Division of Surface Water, Columbus, Ohio.
- Ohio Environmental Protection Agency. 2012. Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams. Version 3.0. Ohio EPA Division of Surface Water, Columbus, Ohio. 117 pp.
- Ohio Environmental Protection Agency, Division of Surface Water. 2017. 401 Water Quality Certification for the Nationwide Permits Stream Eligibility Web Map (2017 Reissuance). <http://oepa.maps.arcgis.com/apps/webappviewer/index.html?id=e6b46d29a38f46229c1eb47deefe49b6>
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Stark County, Ohio. Available online at <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- United States Army Corps of Engineers. 2005. Regulatory Guidance Letter No. 05-05. Ordinary High Water Mark Identification. Available from <http://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-05.pdf>.
- United States Army Corps of Engineers. 2007. *Jurisdictional Determination Form Instructional Guidebook*. Available from http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/jd_guidebook_051207final.pdf.
- United States Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0*, ed. J. S. Wakeley, R.

W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-10-9. Vicksburg, Mississippi:
United States Army Engineer Research and Development Center.

United States Fish and Wildlife Service. 2017. National Wetlands Inventory for Ohio. Washington, D.C.:
U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation. Available from
<http://www.fws.gov/wetlands/Data/Mapper.html>.

United States Fish and Wildlife Service, Environmental Conservation Online System. Information for
Planning and Consultation. <https://ecos.fws.gov/ipac/>.

United States Geological Survey. 1978. Bolivar, Ohio 7.5-Minute Topographic Quadrangle (1:24,000).

TABLES

Table 1
Wetlands Identified Within the Project Study Area

| Wetland I.D. ¹ | Latitude ² | Longitude ² | Proximal Waterbody | USACE Classification ³ | Cowardin Classification ⁴ | Size ⁵ (acres) | ORAM v. 5.0 Score ⁶ | ORAM Category ⁷ | Figure 2 (sheet) |
|---------------------------|-----------------------|------------------------|--------------------|-----------------------------------|--------------------------------------|------------------------------|-----------------------------------|-------------------------------|---------------------|
| W001-PUB-CATMOD2 | 40.715465 | -81.413442 | UNT to Bear Run | Jurisdictional; Adjacent | PUB | 0.665 | 41 | Modified 2 | 1 |
| W001-PEM-CATMOD2 | 40.716043 | -81.413293 | | | PEM | 0.028 | | | |
| W002-PUB-CATMOD2 | 40.713608 | -81.414748 | UNT to Bear Run | Jurisdictional; Adjacent | PUB | 0.484 | 43 | Modified 2 | 1, 2 |
| W002-PFO-CATMOD2 | 40.713885 | -81.415219 | | | PFO | 0.024 | | | |
| W003-PEM-CAT2 | 40.714059 | -81.419265 | UNT to Bear Run | Jurisdictional; Abutting | PEM | 0.694 | 34 | 2 | 1, 2 |
| W004-PUB-CATMOD2 | 40.713242 | -81.420559 | UNT to Bear Run | Jurisdictional; Abutting | PUB | 0.148 | 41 | Modified 2 | 2 |
| W005-PEM-CATMOD2 | 40.714229 | -81.420126 | UNT to Bear Run | Jurisdictional; Abutting | PEM | 0.072 | 37 | Modified 2 | 1 |
| W006-PEM-CAT2 | 40.710323 | -81.415938 | UNT to Bear Run | Jurisdictional; Abutting | PEM | 3.231 | 34 | 2 | 2, 3 |
| W007-PEM-CAT2 | 40.712992 | -81.415815 | UNT to Bear Run | Jurisdictional; Adjacent | PEM | 0.028 | 34 | 2 | 1, 2 |
| W008-PEM-CAT2 | 40.711974 | -81.415862 | UNT to Bear Run | Jurisdictional; Abutting | PEM | 0.134 | 34 | 2 | 2 |
| W009-PEM-CAT2 | 40.712500 | -81.414714 | UNT to Bear Run | Jurisdictional; Abutting | PEM | 0.644 | 34 | 2 | 1, 2 |
| W010-PEM-CAT2 | 40.711034 | -81.415961 | UNT to Bear Run | Jurisdictional; Adjacent | PEM | 0.077 | 33 | 2 | 2 |
| W011-PFO-CATMOD2 | 40.708789 | -81.414864 | UNT to Bear Run | Jurisdictional; Abutting | PFO | 0.072 | 40 | Modified 2 | 3 |
| W012-PFO-CAT1 | 40.707861 | -81.416442 | UNT to Bear Run | Jurisdictional; Adjacent | PFO | 0.032 | 29 | 1 | 3 |
| W013-PFO-CATMOD2 | 40.708263 | -81.416201 | UNT to Bear Run | Jurisdictional; Abutting | PFO | 0.037 | 37 | Modified 2 | 3 |
| W014-PEM-CAT2 | 40.708440 | -81.413717 | UNT to Bear Run | Jurisdictional; Abutting | PEM | 0.405 | 30 | 2 | 3 |
| W015-PEM-CATMOD2 | 40.710146 | -81.412333 | UNT to Bear Run | Jurisdictional; Adjacent | PEM | 0.248 | 42 | Modified 2 | 2, 3 |
| W015-PUB-CATMOD2 | 40.710840 | -81.412600 | | | PUB | 0.400 | | | |

| Wetland I.D. ¹ | Latitude ² | Longitude ² | Proximal Waterbody | USACE Classification ³ | Cowardin Classification ⁴ | Size ⁵ (acres) | ORAM v. 5.0 Score ⁶ | ORAM Category ⁷ | Figure 2 (sheet) |
|---------------------------|-----------------------|------------------------|--------------------|-----------------------------------|--------------------------------------|------------------------------|-----------------------------------|-------------------------------|---------------------|
| W016-PEM-CAT2 | 40.712173 | -81.412434 | UNT to Bear Run | Jurisdictional; Adjacent | PEM | 0.149 | 32 | 2 | 1, 2 |
| W017-PEM-CAT1 | 40.714070 | -81.413402 | UNT to Bear Run | Jurisdictional; Adjacent | PEM | 0.145 | 23 | 1 | 1, 2 |
| W018-PEM-CAT2 | 40.710934 | -81.419194 | UNT to Bear Run | Jurisdictional; Adjacent | PEM | 0.331 | 45 | 2 | 2, 3 |
| W018-PSS-CAT2 | 40.709731 | -81.418375 | | | PSS | 0.222 | | | |
| W019-PEM-CAT2 | 40.708345 | -81.417928 | UNT to Bear Run | Jurisdictional; Adjacent | PEM | 0.552 | 45 | 2 | 3 |
| W020-PSS-CATMOD2 | 40.707939 | -81.419918 | UNT to Bear Run | Jurisdictional; Adjacent | PSS | 0.299 | 39 | Modified 2 | 3 |
| W021-PUB-CATMOD2 | 40.709078 | -81.420501 | UNT to Bear Run | Jurisdictional; Adjacent | PUB | 0.087 | 37 | Modified 2 | 3 |
| W022-PUB-CATMOD2 | 40.709984 | -81.419690 | UNT to Bear Run | Jurisdictional; Adjacent | PUB | 0.289 | 42 | Modified 2 | 2, 3 |

Notes:

- ¹ GAI map designation.
- ² North American Datum, 1983.
- ³ Jurisdictional status is the opinion of GAI and must be confirmed by USACE and state agencies through the JD process.
- ⁴ PEM - Palustrine Emergent; PSS - Palustrine Scrub-Shrub; PFO - Palustrine Forested; PUB - Palustrine Unconsolidated Bottom.
- ⁵ Total acreage of wetland located within the Project study area.
- ⁶ Interim scoring breakpoints for wetland regulatory categories for ORAM v 5.0 Score: Category 1 score 0 - 29.9; Category 1 or 2 gray zone ORAM score 30 - 34.9; Category modified 2 ORAM score 35 - 44.9; Category 2 ORAM score 45 - 59.9; Category 2 or 3 ORAM score 60 - 64.9; Category 3 ORAM score 65 - 100. OEPA Ecology Unit Division of Surface Water. *ORAM v. 5.0 Qualitative Score Calibration*. Dated August 15, 2000. http://www.epa.ohio.gov/portals/35/401/oram50sc_s.pdf.
- ⁷ OAC Rule 3745-1-54(C)(2) defines Category 1 wetlands as wetlands which "...support minimal wildlife habitat, and minimal hydrological and recreation functions," and as wetlands which have "...hydrologic isolation, low species diversity, a predominance of non-native species, no significant habitat or wildlife use, and limited potential to achieve beneficial wetland functions." Category 2 wetlands are defined as wetlands which "...support moderate wildlife habitat, or hydrological or recreational functions," and as wetlands which are "...dominated by native species but generally without the presence of, or habitat for, rare, threatened or endangered species; and wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions." Degraded but Restorable Category 2 Wetlands are according to OAC Rule 3745-1-54(C) states that wetlands that are assigned to Category 2 constitute the broad middle category that "...support moderate wildlife habitat, or hydrological or recreational functions," but also include "...wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions." OAC Rule 3745-1-54(C)(2) defines Category 3 wetlands as wetlands which "...support superior habitat, or hydrological or recreational functions," and as wetlands which have "...high levels of diversity, a high proportion of native species, or high functional values."

Table 2
Waterbodies Identified Within the Project Study Area

| Stream I.D. ¹ | Waterbody Name | OEPA WQ Designation ² | OEPA Stream Eligibility ³ | Stream Type | USACE Classification ⁴ | HHEI Score ⁵ | PHWH Class ⁵ | QHEI Score ⁶ | Bank Width ⁷ (feet) | OHEW Width (feet) | OHEW Depth (inches) | Stream Length ⁸ (feet) | Latitude ⁹ | Longitude ⁹ | Figure 2 (sheet) |
|--------------------------|-----------------|----------------------------------|--------------------------------------|--------------|-----------------------------------|-------------------------|-------------------------|-------------------------|--------------------------------|-------------------|---------------------|-----------------------------------|-----------------------|------------------------|------------------|
| S001 | UNT to Bear Run | - | Eligible | Ephemeral | NRPW | 26 | Modified Class I | - | 4 | 3 | 4 | 316 | 40.71411 | -81.41549 | 1, 2 |
| S002 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 29 | Modified Class I | - | 3 | 2 | 4 | 84 | 40.71445 | -81.41926 | 1 |
| S003 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 39 | Modified Class II | - | 4 | 3 | 6 | 322 | 40.71377 | -81.42033 | 1, 2 |
| S004 | UNT to Bear Run | - | Eligible | Perennial | RPW | 61 | Modified Class II | - | 6 | 4 | 5 | 2,921 | 40.71246 | -81.41758 | 1, 2, 3 |
| S005 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 54 | Modified Class II | - | 8 | 4 | 10 | 1,425 | 40.71273 | -81.41618 | 1, 2 |
| S006 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 50 | Modified Class II | - | 4 | 3 | 4 | 509 | 40.71185 | -81.41517 | 2 |
| S007 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 44 | Modified Class II | - | 5 | 2.5 | 6 | 84 | 40.70915 | -81.41508 | 2, 3 |
| S008 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 55 | Modified Class II | - | 7 | 5 | 8 | 357 | 40.70905 | -81.41511 | 2, 3 |
| S009 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 55 | Modified Class II | - | 5 | 2.5 | 6 | 639 | 40.70850 | -81.41578 | 3 |
| S010 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 39 | Modified Class II | - | 3 | 2 | 4 | 662 | 40.70921 | -81.41281 | 2, 3 |
| S011 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 52 | Modified Class II | - | 5 | 3 | 6 | 682 | 40.70979 | -81.41712 | 2, 3 |
| S012 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 28 | Modified Class I | - | 3 | 2 | 4 | 64 | 40.70939 | -81.41819 | 2, 3 |
| S013 | UNT to Bear Run | - | Eligible | Intermittent | RPW | 40 | Modified Class II | - | 4 | 2.5 | 4 | 240 | 40.70747 | -81.41973 | 3 |
| S014 | UNT to Bear Run | - | Eligible | Ephemeral | NRPW | 31 | Class II | - | 4 | 2 | 4 | 114 | 40.70735 | -81.42114 | 3 |

Notes:

- ¹ GAI map designation.
- ² As defined by OAC Chapter 3745-1 Water Quality Standards, Water use designations and statewide criteria (OAC 3745-1-09). http://www.epa.ohio.gov/dsw/rules/3745_1.aspx.
- ³ As defined by the 401 WQC conditions for stream eligibility coverage under the 2017 NWP program. Streams located in Possibly Eligible areas are eligible for coverage if the pH is <6.5 or stream flow is ephemeral. Streams located in Possibly Eligible areas are also eligible for coverage if the HHEI score is <50, or if the HHEI score is between 50-69 and substrate composition is ≤10% coarse types (includes cumulative percentage of bedrock, boulders, boulder slabs, and cobble).
- ⁴ Jurisdictional status is the opinion of GAI and must be confirmed by USACE and state agencies through the JD process. RPW - Relatively Permanent Waters.
- ⁵ Scoring for OEPA Headwater Habitat Evaluation Index (HHEI) Primary Headwater Habitats (PHWH). Class I = 0 - 29.9 and include "normally dry channels with little or no aquatic life present"; Class II = 30 - 69.9 and are equivalent to "warm water habitat"; Class III = 70 – 100 and typically have perennial flow with cool-cold water adapted native fauna.
- ⁶ Narrative rating for headwater streams using the OEPA Qualitative Habitat Evaluation Index (QHEI). Excellent = ≥70; Good = 55 - 60; Fair = 43 - 54; Poor = 30 - 42; Very Poor = <30.
- ⁷ Width in feet from tops of stream bank.
- ⁸ Total stream length (in feet) located within the Project study area.
- ⁹ North American Datum, 1983.

Table 3
ODNR and USFWS RTE Species and Critical Habitat Review Results

| Common Name | Scientific Name | Habitat Type | Listing Status ¹ | Habitat Type Present Within the Project Area? | Impacts to Habitat/Species Anticipated? | Restricted Construction Dates |
|--------------------------------------|---------------------------------------|--|-----------------------------|---|---|-------------------------------|
| Bats | | | | | | |
| Indiana bat ^{2, 4} | <i>Myotis sodalis</i> | Trees >3" dbh | E, FE | Yes | No; Avoided with winter tree clearing | April 1 to September 30 |
| Northern long-eared bat ² | <i>Myotis septentrionalis</i> | Roost in cavities or in crevices of both live trees and snags; Hibernate in caves and mines with constant temperatures, high humidity, and no air currents | SC, FT | Yes | No; Avoided with winter tree clearing | April 1 to September 30 |
| Fish | | | | | | |
| Iowa darter ⁴ | <i>Etheostoma exile</i> | Cool, clear water over a sand or organic-matter substrate | E | No | No; Known habitat types are not present within the Project area | April 15 to June 30 |
| Insects | | | | | | |
| Regal fritillary | <i>Speyeria idalia</i> | Tall-grass and mixed-grass prairies | E | No | No; Known habitat types are not present within the Project area | - |
| Mammals | | | | | | |
| Black bear ⁴ | <i>Ursus americanus</i> | Large forested areas | E | Yes | No; Per the ODNR response, impacts are unlikely due to the migratory nature of this species | - |
| Mussels | | | | | | |
| Clubshell | <i>Pleurobema clava</i> | Prefers clean, loose sand and gravel in medium to small rivers and streams | E, FE | No | No; Known habitat types are not present within the Project area | - |
| Rabbitsfoot | <i>Quadrula cylindrica cylindrica</i> | Streams with flowing water | E, FT | Yes | No; In-stream work is not proposed | - |
| Long solid ⁴ | <i>Fusconaia maculata maculata</i> | Streams with flowing water | E | Yes | No; In-stream work is not proposed | - |

| Common Name | Scientific Name | Habitat Type | Listing Status ¹ | Habitat Type Present Within the Project Area? | Impacts to Habitat/Species Anticipated? | Restricted Construction Dates |
|--------------------------------------|--|---|-----------------------------|---|---|-------------------------------|
| Plants | | | | | | |
| Small purple-foxglove | <i>Agalinis purpurea var. parviflora</i> | Damp, open situations; Shores, fens, and barrens | E | No | No; Known habitat types are not present within the Project area | - |
| Variegated scouring-rush | <i>Equisetum variegatum</i> | Wet thickets, bogs, and sandy shores | E | No | No; Known habitat types are not present within the Project area | - |
| Bog bedstraw | <i>Galium labradoricum</i> | Open areas of sphagnum bogs, fens, sedge meadows, and marshy ground along streams and lakes | E | No | No; Known habitat types are not present within the Project area | - |
| Flat-leaved rush | <i>Juncus platyphyllus</i> | Wet habitats; riverbanks and pond margins | E | Yes | No; Impacts to this species are not anticipated, per the agency responses | - |
| Bog willow | <i>Salix pedicellaris</i> | Neutral bogs, sedge meadows, and willow thickets at the edge of wet meadows | E | No | No; Known habitat types are not present within the Project area | - |
| Shore-growing peat moss ³ | <i>Sphagnum riparium</i> | Wet minerotrophic sites such as open bog mats (often near the water's edge), occasionally in roadside ditches | E | Yes | No; Impacts to this species are not anticipated, per the agency responses | - |
| Brush tipped emerald ³ | <i>Somatochlora walshii</i> | Lake outlets, pond outlets, and small streams that go through bogs, fens, or marshes. | E | No | No; Known habitat types are not present within the Project Area | - |
| Pitcher-plant | <i>Sarracenia purpurea</i> | Open areas of sphagnum bogs and marl fens | T | No | No; Known habitat types are not present within the Project area | - |
| Few-seeded sedge | <i>Carex oligosperma</i> | Open, wet situations in acidic substrates; Peat bogs, marshes, and bog lakes | T | No | No; Known habitat types are not present within the Project area | - |
| Green spike-rush | <i>Eleocharis flavescens</i> | A variety of wet, open situations; Shores, pond margins, bog mats, and fields | T | Yes | No; Impacts to this species are not anticipated, per the agency responses | - |
| Simple willow-herb | <i>Epilobium strictum</i> | Wet, semi-open to open situations; Swamps, bogs, mossy thickets, sedge marshes, and wet meadows | T | Yes | No; Impacts to this species are not anticipated, per the agency responses | - |

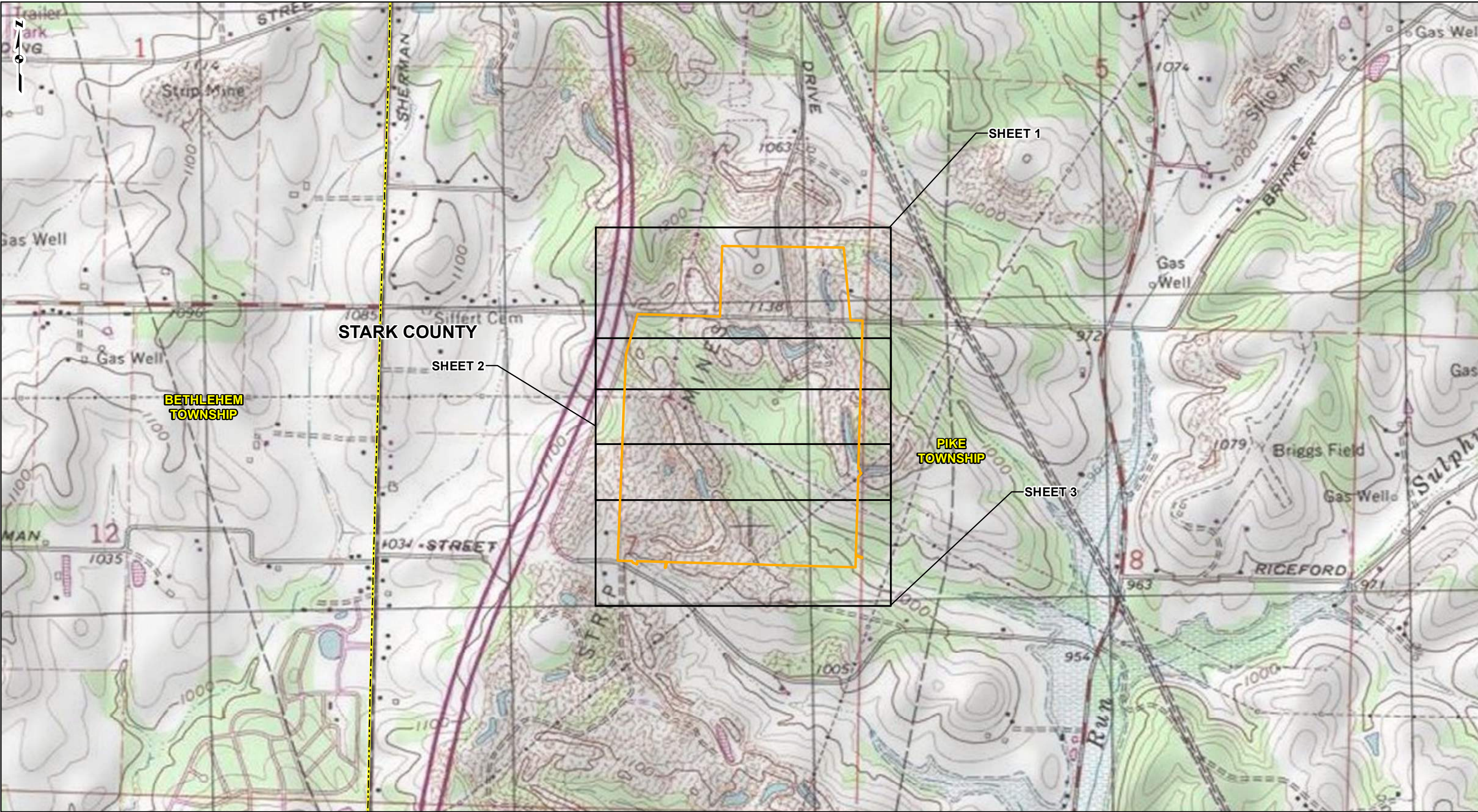
| Common Name | Scientific Name | Habitat Type | Listing Status ¹ | Habitat Type Present Within the Project Area? | Impacts to Habitat/Species Anticipated? | Restricted Construction Dates |
|---------------------------|--|---|-----------------------------|---|---|-------------------------------|
| Plants (Continued) | | | | | | |
| Tawny cotton-grass | <i>Eriophorum virginicum</i> | Open, moist situations, usually in acidic substrates; Bogs, peaty meadows, and lake margins | T | No | No; Known habitat types are not present within the Project area | - |
| Sharp-glumed manna grass | <i>Glyceria acutiflora</i> | Wet soil; Shallow water of ponds and swamps | T | Yes | No; Impacts to this species are not anticipated, per the agency responses | - |
| Northern St.John's-wort | <i>Hypericum boreale</i> | Wet, open to semi-open situations; Shallow water, marshes, and peaty, sandy or mucky lakeshores | T | No | No; Known habitat types are not present within the Project area | - |
| Leggett's pinweed | <i>Lechea pulchella</i> | Dry to moist sandy plains, shores, and open woods | T | No | No; Known habitat types are not present within the Project area | - |
| Flat-stemmed pondweed | <i>Potamogeton zosteriflorus</i> | Shallow to deep waters of lakes, rivers, creeks, and wet swales | T | No | No; Known habitat types are not present within the Project area | - |
| Marsh five-finger | <i>Potentilla palustris</i> | Lake shores, marshy riversides, and stream margins | T | No | No; Known habitat types are not present within the Project area | - |
| Hooded ladies'-tresses | <i>Spiranthes romanzoffiana</i> | Usually calcareous soils in alkaline fens, rich open woods, and wet sands | T | No | No; Known habitat types are not present within the Project area | - |
| Drummond's aster | <i>Symphyotrichum drummondii</i> | Open to semi-open situations, often in dry, calcareous substrates; Prairies, open woods, woods edges, thickets, and roadsides | T | No | No; Known habitat types are not present within the Project area | - |
| Flat-leaved bladderwort | <i>Utricularia intermedia</i> | Full sun, in both bogs and fens; Floating or rooted in mud in quiet, shallow waters | T | No | No; Known habitat types are not present within the Project area | - |
| Small cranberry | <i>Vaccinium oxycoccos</i> | Acidic sphagnum mounds in bogs, usually in drier areas of the bog | T | No | No; Known habitat types are not present within the Project area | - |
| Highbush-cranberry | <i>Viburnum opulus var. americanum</i> | Moist forests and forest edges, thickets, and on rocky slopes, margins of wetlands, streambanks, river terraces, and rocky shorelines | T | No | No; Known habitat types are not present within the Project area | - |

| Common Name | Scientific Name | Habitat Type | Listing Status ¹ | Habitat Type Present Within the Project Area? | Impacts to Habitat/Species Anticipated? | Restricted Construction Dates |
|----------------------------------|-------------------------|---|-----------------------------|---|---|-------------------------------|
| <i>Plants (Continued)</i> | | | | | | |
| Wild rice | <i>Zizania aquatica</i> | Full sun, in water no more than two feet deep | T | No | No; Known habitat types are not present within the Project area | - |
| <i>Reptiles</i> | | | | | | |
| Spotted turtle ⁴ | <i>Clemmys guttata</i> | Fens, bogs, marshes, wet prairies, pond edges, wet woods and shallow sluggish waters of small streams and ditches | T | Yes | No; Per ODNR response, due to the type of habitat present, and the type of work proposed, the Project is not likely to impact this species. | - |

Notes:

- ¹ E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; FE = federal endangered; FT = federal threatened; FSC = federal species of concern; FC = federal candidate.
- ² Federally listed species, migratory bird, or species of concern comments included in the USFWS response, dated September 22, 2017.
- ³ Natural Heritage Database record at or within a one-mile radius of the Project area.
- ⁴ ODNR, Division of Wildlife (DOW) comments included in the ODNR response, dated December 20, 2017.

FIGURES



PROJECT LOCATION



STARK COUNTY, OHIO


REFERENCES: USGS 7.5' TOPOGRAPHIC QUADRANGLE: BOLIVAR (1978), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 01/2019.


LEGEND

- Study Area
- Sheet Index
- Township Boundary
- County Boundary

0 500 1,000 2,000 Feet

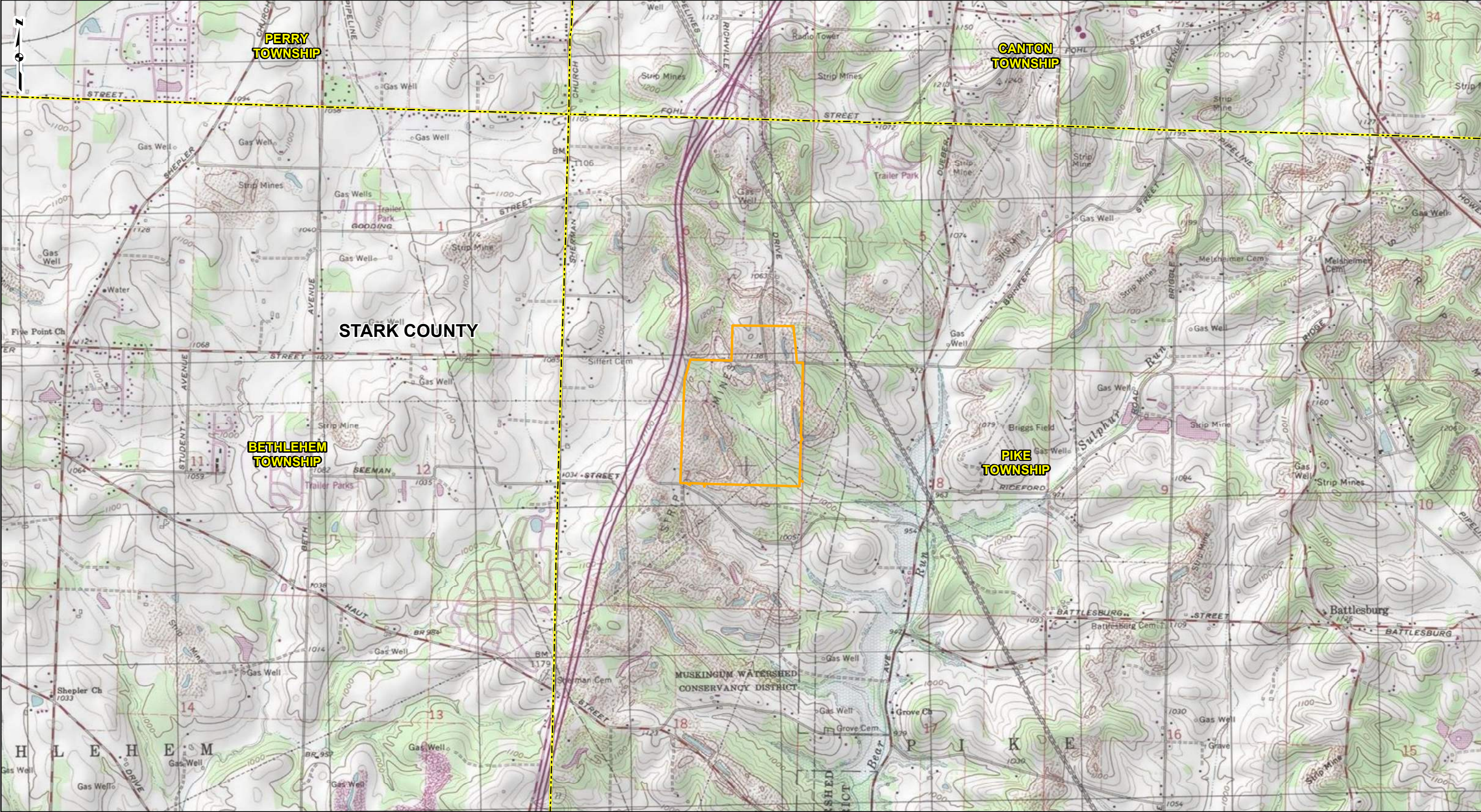
FIGURE 2
RESOURCE LOCATION MAP
SHEET INDEX

 **SOUTH CANTON 765 kV**
STATION SECURITY PROJECT
AMERICAN ELECTRIC POWER



DRAWN BY: JTH
CHECKED: JDP

DATE: 1/10/2019
APPROVED:



PROJECT LOCATION



STARK COUNTY, OHIO

REFERENCES: USGS 7.5' TOPOGRAPHIC QUADRANGLES: BOLIVAR (1978) AND WAYNESBURG (1978), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 01/2019.

LEGEND

- Study Area
- Township Boundary
- County Boundary

0 1,000 2,000 4,000 Feet

FIGURE 1
PROJECT LOCATION MAP

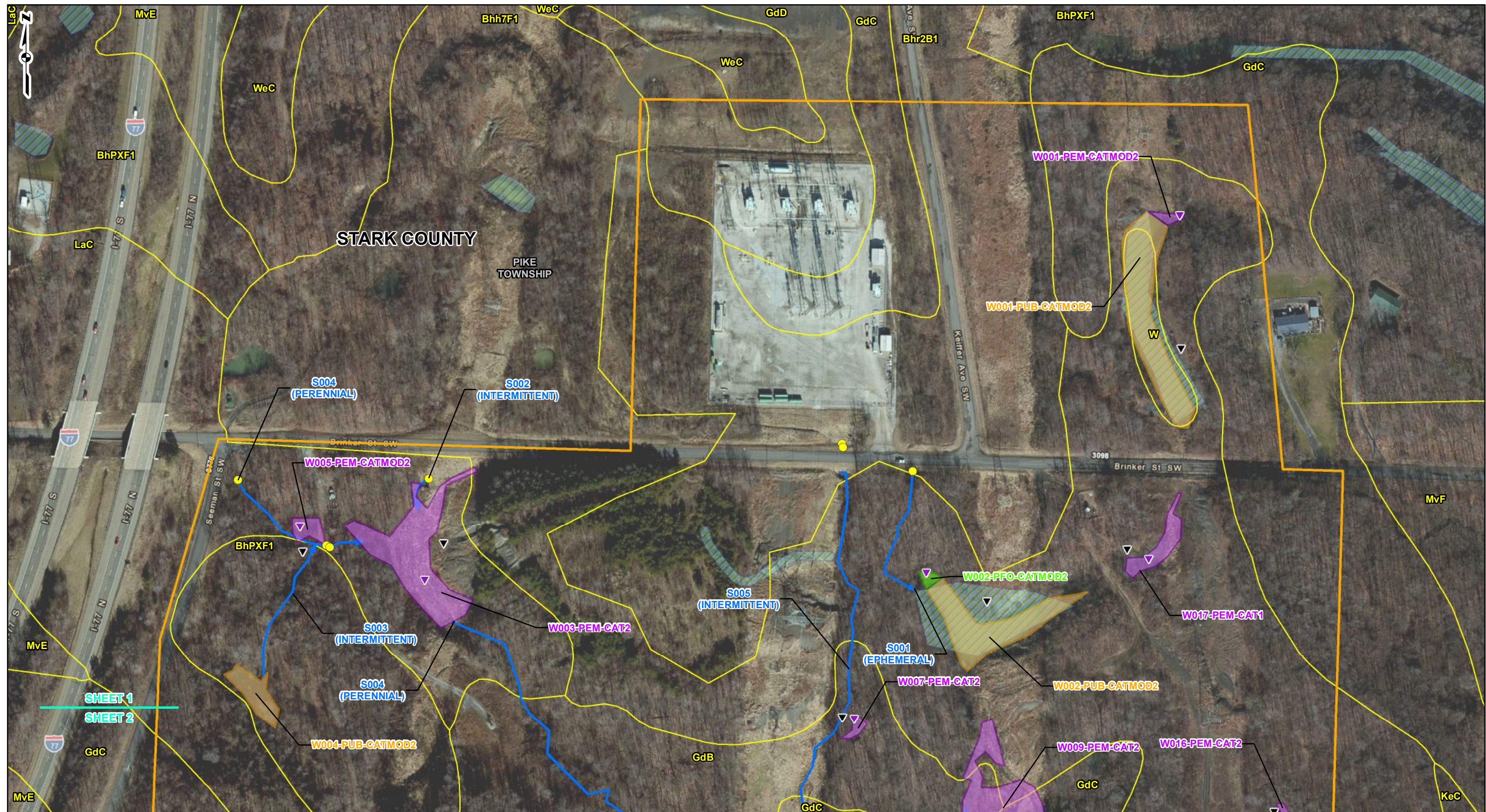


SOUTH CANTON 765 kV
STATION SECURITY PROJECT
AMERICAN ELECTRIC POWER



DRAWN BY: JTH
CHECKED: JDP

DATE: 1/10/2019
APPROVED:



PROJECT LOCATION

STARK COUNTY, OHIO

REFERENCES: ESRI WORLD IMAGERY (CLARITY), ARCGIS ONLINE, ACCESSED 01/2019. WORLD TRANSPORTATION, ESRI, DELORME, HERE, MAPMYINDIA, TOMTOM, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, OBTAINED THROUGH ESRI ARCGIS ONLINE, ACCESSED 01/2019. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2018. NATIONAL FLOOD HAZARD LAYER, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), OHIO, 2018. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR STARK COUNTY, OHIO, USDA/NRCS, 2017. ODNr (OHIO DEPARTMENT OF NATURAL RESOURCES) LAND, 2014.

LEGEND

| | | | |
|----------------------|--------------------|---------------------|---------------------|
| ● Culvert | Study Area | 100-Year Floodplain | Wetland Type |
| ▼ Upland Data Point | Soil Type Boundary | FEMA Floodway | PEM |
| ▼ Wetland Data Point | ODNR Land | Township Boundary | PFO |
| → Stream | NWI Wetland | County Boundary | PSS |
| | | | PUB |

0 100 200 400 Feet

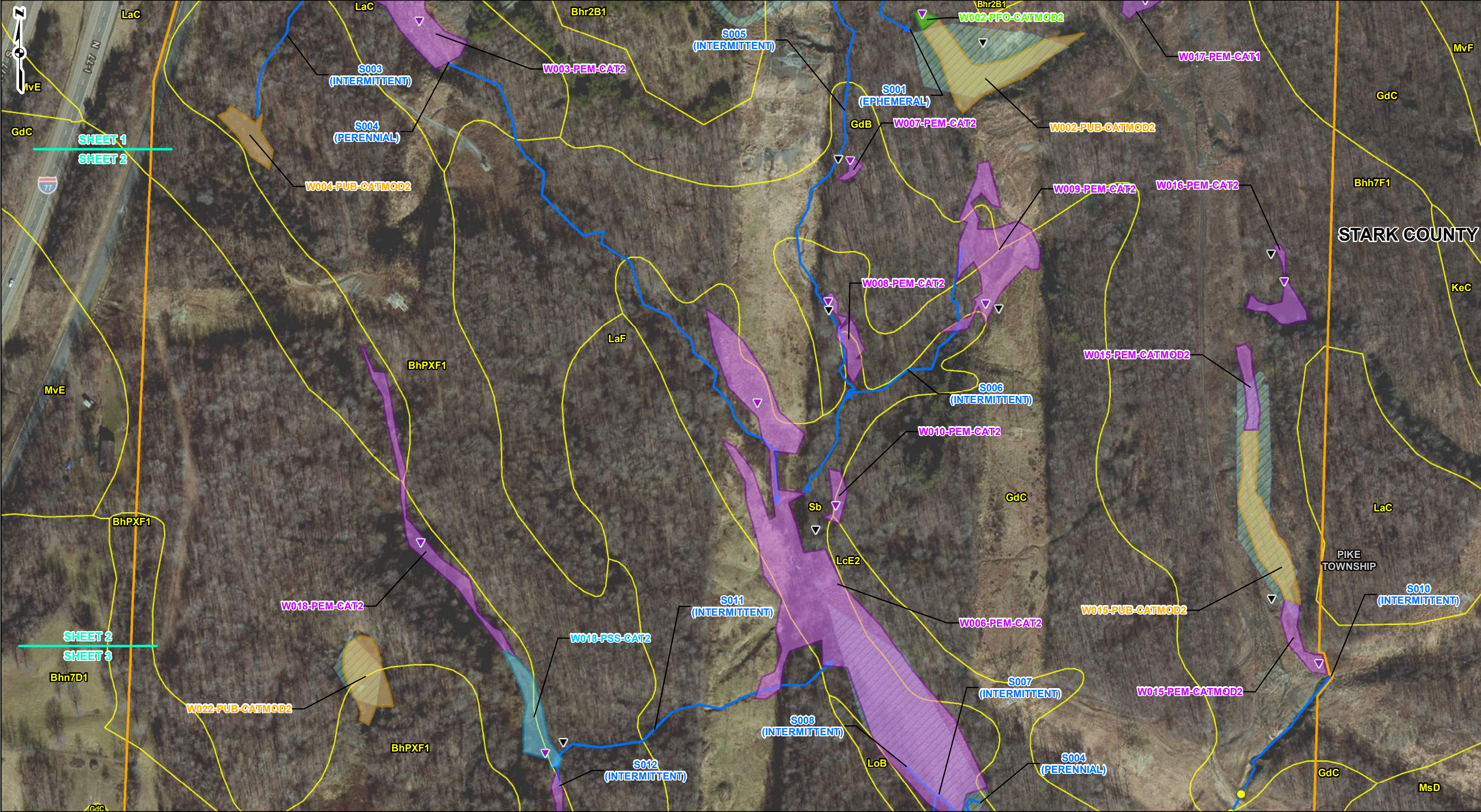
FIGURE 2
RESOURCE LOCATION MAP
SHEET 1 OF 3

SOUTH CANTON 765 kV
STATION SECURITY PROJECT
AMERICAN ELECTRIC POWER

gai consultants

DRAWN BY: JTH
CHECKED: JDP

DATE: 1/10/2019
APPROVED:















PROJECT LOCATION



STARK COUNTY, OHIO


REFERENCES: ESRI WORLD IMAGERY (CLARITY), ARCGIS ONLINE, ACCESSED 01/2019. WORLD TRANSPORTATION, ESRI, DELORME, HERE, MAPMYINDIA, TOMTOM, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, OBTAINED THROUGH ESRI ARCGIS ONLINE, ACCESSED 01/2019. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2018. NATIONAL FLOOD HAZARD LAYER, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), OHIO, 2018. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR STARK COUNTY, OHIO, USDA/NRCS, 2017. ODNr (OHIO DEPARTMENT OF NATURAL RESOURCES) LAND, 2014.


LEGEND

| | | | |
|--|--|---|---------------------|
|  Culvert |  Study Area |  100-Year Floodplain | Wetland Type |
|  Upland Data Point |  Soil Type Boundary |  FEMA Floodway | |
|  Wetland Data Point |  ODNr Land |  Township Boundary | |
|  Stream |  NWI Wetland |  County Boundary | |

0 100 200 400 Feet

FIGURE 2
RESOURCE LOCATION MAP
SHEET 2 OF 3

 **SOUTH CANTON 765 kV**
STATION SECURITY PROJECT
AMERICAN ELECTRIC POWER



DRAWN BY: JTH
CHECKED: JDP

DATE: 1/10/2019
APPROVED:



PROJECT LOCATION

STARK COUNTY, OHIO

REFERENCES: ESRI WORLD IMAGERY (CLARITY), ARCGIS ONLINE, ACCESSED 01/2019. WORLD TRANSPORTATION, ESRI, DELORME, HERE, MAPMYINDIA, TOMTOM, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, OBTAINED THROUGH ESRI ARCGIS ONLINE, ACCESSED 01/2019. NATIONAL WETLAND INVENTORY (NWI) WETLANDS, USFWS, 2018. NATIONAL FLOOD HAZARD LAYER, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), OHIO, 2018. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR STARK COUNTY, OHIO, USDA/NRCS, 2017. ODNr (OHIO DEPARTMENT OF NATURAL RESOURCES) LAND, 2014.

LEGEND

| | | | |
|----------------------|--------------------|---------------------|---------------------|
| ● Culvert | Study Area | 100-Year Floodplain | Wetland Type |
| ▼ Upland Data Point | Soil Type Boundary | FEMA Floodway | PEM |
| ▼ Wetland Data Point | ODNR Land | Township Boundary | PFO |
| → Stream | NWI Wetland | County Boundary | PSS |
| | | | PUB |

0 100 200 400 Feet

FIGURE 2
RESOURCE LOCATION MAP
SHEET 3 OF 3

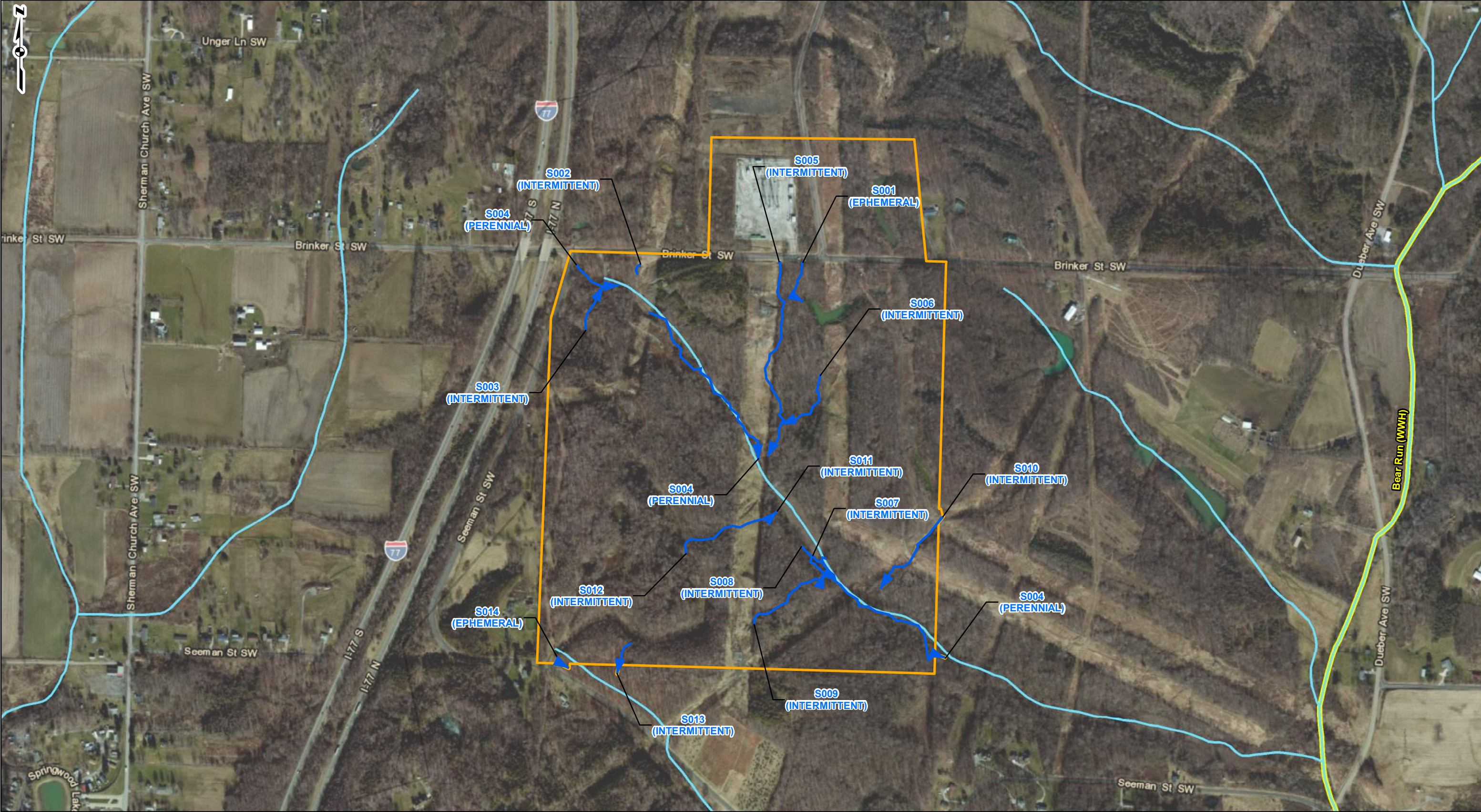
SOUTH CANTON 765 kV
STATION SECURITY PROJECT
AMERICAN ELECTRIC POWER

gai consultants

DRAWN BY: JTH
CHECKED: JDP

DATE: 1/10/2019
APPROVED:

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY



PROJECT LOCATION



STARK COUNTY, OHIO


REFERENCES: ESRI WORLD IMAGERY (CLARITY), ARCGIS ONLINE, ACCESSED 01/2019. WORLD TRANSPORTATION, ESRI, DELORME, HERE, MAPMYINDIA, TOMTOM, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, OBTAINED THROUGH ESRI ARCGIS ONLINE, ACCESSED 01/2019. STREAM ELIGIBILITY, OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA), 2017. NHD STREAMS, NATIONAL HYDROGRAPHY DATASET (NHD), USGS, 2018. WQS STREAMS, OHIO WATER QUALITY STANDARDS, 2010.

LEGEND


| | |
|---------------|---------------------------------|
| Stream | OEPA Stream Eligibility: |
| Study Area | Ineligible |
| NHD Stream | Possibly Eligible |
| OH WQS Stream | Eligible |

0 300 600 1,200 Feet

**FIGURE 3
STREAM ELIGIBILITY MAP**



**SOUTH CANTON 765 kV
STATION SECURITY PROJECT
AMERICAN ELECTRIC POWER**



DRAWN BY: JTH
CHECKED: JDP

DATE: 1/10/2019
APPROVED:

APPENDIX A

Photographs



Photograph 1. Wetland W001-PEM-CATMOD2, Facing West



Photograph 2. Wetland W001-PEM-CATMOD2, Facing North



Photograph 3. Wetland W001-PUB-CATMOD2, Facing East



Photograph 4. Wetland W001-PUB-CATMOD2, Facing South



Photograph 5. Wetland W002-PFO-CATMOD2, Facing West



Photograph 6. Wetland W002-PFO-CATMOD2, Facing East



Photograph 7. Wetland W002-PUB-CATMOD2, Facing South



Photograph 8. Wetland W002-PUB-CATMOD2, Facing North



Photograph 9. Wetland W003-PEM-CAT2, Facing South



Photograph 10. Wetland W003-PEM-CAT2, Facing North



Photograph 11. Wetland W004-PUB-CATMOD2, Facing West



Photograph 12. Wetland W004-PUB-CATMOD2, Facing South



Photograph 13. Wetland W005-PEM-CATMOD2, Facing East



Photograph 14. Wetland W005-PEM-CATMOD2, Facing South



Photograph 15. Wetland W006-PEM-CAT2, Facing North



Photograph 16. Wetland W006-PEM-CAT2, Facing East



Photograph 17. Wetland W007-PEM-CAT2, Facing West



Photograph 18. Wetland W007-PEM-CAT2, Facing East



Photograph 19. Wetland W008-PEM-CAT2, Facing West



Photograph 20. Wetland W008-PEM-CAT2, Facing South



Photograph 21. Wetland W009-PEM-CAT2, Facing West



Photograph 22. Wetland W009-PEM-CAT2, Facing North



Photograph 23. Wetland W010-PEM-CAT2, Facing North



Photograph 24. Wetland W010-PEM-CAT2, Facing West



Photograph 25. Wetland W011-PFO-CATMOD2, Facing South



Photograph 26. Wetland W011-PFO-CATMOD2, Facing East



Photograph 27. Wetland W012-PFO-CAT1, Facing East



Photograph 28. Wetland W012-PFO-CAT1, Facing South



Photograph 29. Wetland W013-PFO-CATMOD2, Facing West



Photograph 30. Wetland W013-PFO-CATMOD2, Facing South



Photograph 31. Wetland W014-PEM-CAT2, Facing North



Photograph 32. Wetland W014-PEM-CAT2, Facing East



Photograph 33. Wetland W015-PEM-CATMOD2, Facing North



Photograph 34. Wetland W015-PEM-CATMOD2, Facing South



Photograph 35. Wetland W015-PUB-CATMOD2, Facing East



Photograph 36. Wetland W015-PUB-CATMOD2, Facing South



Photograph 37. Wetland W016-PEM-CAT2, Facing South



Photograph 38. Wetland W016-PEM-CAT2, Facing North



Photograph 39. Wetland W017-PEM-CAT1, Facing East



Photograph 40. Wetland W017-PEM-CAT1, Facing South



Photograph 41. Wetland W018-PEM-CAT2, Facing South



Photograph 42. Wetland W018-PEM-CAT2, Facing North



Photograph 43. Wetland W018-PSS-CAT2, Facing North



Photograph 44. Wetland W018-PSS-CAT2, Facing East



Photograph 45. Wetland W019-PEM-CAT2, Facing West



Photograph 46. Wetland W019-PEM-CAT2, Facing East



Photograph 47. Wetland W020-PSS-CATMOD2, Facing South



Photograph 48. Wetland W020-PSS-CATMOD2, Facing East



Photograph 49. Wetland W021-PUB-CATMOD2, Facing North



Photograph 50. Wetland W021-PUB-CATMOD2, Facing West



Photograph 51. Wetland W022-PUB-CATMOD2, Facing North



Photograph 52. Wetland W022-PUB-CATMOD2, Facing West



Photograph 53. Stream S001, Upstream, Facing North



Photograph 54. Stream S001, Downstream, Facing South



Photograph 55. Stream S002, Upstream, Facing North



Photograph 56. Stream S002, Downstream, Facing South



Photograph 57. Stream S003, Upstream, Facing South



Photograph 58. Stream S003, Downstream, Facing North



Photograph 59. Stream S004, Upstream, Facing Northwest



Photograph 60. Stream S004, Downstream, Facing Southeast



Photograph 61. Stream S005, Upstream, Facing North



Photograph 62. Stream S005, Downstream, Facing South



Photograph 63. Stream S006, Upstream, Facing Northeast



Photograph 64. Stream S006, Downstream, Facing Southwest



Photograph 65. Stream S007, Upstream, Facing North



Photograph 66. Stream S007, Downstream, Facing South



Photograph 67. Stream S008, Upstream, Facing Northwest



Photograph 68. Stream S008, Downstream, Facing Southeast



Photograph 69. Stream S009, Upstream, Facing Southwest



Photograph 70. Stream S009, Downstream, Facing Northeast



Photograph 71. Stream S010, Upstream, Facing Northeast



Photograph 72. Stream S010, Downstream, Facing Southwest



Photograph 73. Stream S011, Upstream, Facing West



Photograph 74. Stream S011, Downstream, Facing East



Photograph 75. Stream S012, Upstream, Facing South



Photograph 76. Stream S012, Downstream, Facing North



Photograph 77. Stream S013, Upstream, Facing North



Photograph 78. Stream S013, Downstream, Facing South



Photograph 79. Stream S014, Upstream, Facing Northwest



Photograph 80. Stream S014, Downstream, Facing Southeast



Photograph 81. Representative upland habitat, Facing South



Photograph 82. Representative upland habitat, Facing West



Photograph 83. Representative upland habitat, Facing South



Photograph 84. Representative upland habitat, Facing West

APPENDIX B

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/7/2017
 Applicant/Owner: AEP State: OH Sampling Point: W001-PEM-CATMOD2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.716050 Long: -81.413203 Datum: NAD83
 Soil Map Unit Name: Bhh7F1-Bethesda Channery loam, 25 to 70% slopes NWI classification: DUG
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Remarks: <u>Wetland data point for W001-PEM-CATMOD2.</u> <u>Data point taken at strip mine pond under transmission line ROW.</u> | | | | | |

HYDROLOGY

| | | | |
|---|--|--|--|
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |

Remarks: Wetland hydrology Indicators are C3, D2 and D5.

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|----------------|--------------------------|------------------|-------------------|------------------|--|
| 1. <u>none</u> | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | <u>0</u> | = Total Cover | | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--------------------------|--------------------------|------------------|-------------------|------------------|--|
| 1. <u>Frangula alnus</u> | | <u>10</u> | <u>Y</u> | <u>FAC</u> | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | <u>10</u> | = Total Cover | | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|----------------------------------|-------------------------|------------------|-------------------|------------------|--|
| 1. <u>Leersia oryzoides</u> | | <u>70</u> | <u>Y</u> | <u>Obl</u> | |
| 2. <u>Typha x glauca</u> | | <u>10</u> | <u>N</u> | <u>Obl</u> | |
| 3. <u>Eupatorium perfoliatum</u> | | <u>5</u> | <u>N</u> | <u>FACW</u> | |
| 4. <u>Orochelea sensibilis</u> | | <u>15</u> | <u>N</u> | <u>FACW</u> | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | <u>100</u> | = Total Cover | | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--------------------|--------------------------|------------------|-------------------|------------------|--|
| 1. <u>none</u> | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | <u>0</u> | = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|----------------------|---------------------|
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant - passes the dominance test and rapid test.

SOIL

Sampling Point: W001-PEM-CATMOD2

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

Soil Description Remarks:

Meets F3.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/7/2017
 Applicant/Owner: APP State: OH Sampling Point: W001-PEM-CATMOD2-UPL
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 01
 Subregion (LRR or MLRA): LRR Lat: 40.715247 Long: -81.413208 Datum: NAD 83
 Soil Map Unit Name: Bhh7F1-Bethesda channery loam, 25 to 70% slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|--|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Remarks: <u>Upland data point for W001-PEM-CATMOD2.</u> <u>Data point taken on top of old spoil pile from pre-law strip mine.</u> | | | | | |

HYDROLOGY

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |

Remarks: Wetland hydrology is not present.

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>0</u> | = Total Cover | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|---------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Rubus allegheniensis</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 2. <u>Gleditsia triacanthos</u> | | <u>5</u> | <u>N</u> | <u>FAC</u> |
| 3. <u>Frangula alnus</u> | | <u>5</u> | <u>N</u> | <u>FAC</u> |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>30</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Phytolacca americana</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. <u>Cirsium arvense</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 3. <u>Panicum clagastinum</u> | | <u>5</u> | <u>N</u> | <u>FACW</u> |
| 4. <u>Solidago canadensis</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>55</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

Upland veg is dominant.

Sampling Point: W001-PEM-CATMODZ-
UPL

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147,148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: _____

Depth (inches): _____

Hydric
Soil Present? Yes ☐ No ☒

Hydric Soils not present. - Soils are entirely coal spoil

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/7/2017
 Applicant/Owner: AEP State: OH Sampling Point: W002-PFO-CATMOD2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0/
 Subregion (LRR or MLRA): LRR Lat: 40.713918 Long: -81.415243 Datum: NAD83
 Soil Map Unit Name: Bhh7F1-Bethesda Channery loam, 25 to 70% slopes NWI classification: PUBGx
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|--|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Remarks: <u>Wetland data point for W002-PFO-CATMOD2.</u> <u>Data point taken on backside PUB.</u> | | | | | |

HYDROLOGY

| | | | |
|---|--|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> | | <u>Secondary Indicators (minimum of two required)</u> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> <input checked="" type="checkbox"/> Geomorphic Position (D2) Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> <input checked="" type="checkbox"/> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |

Remarks: Wetland hydrology indicators are C3, D2 and D5.

VEGETATION - Use scientific names of plants.

Sampling Point: W002-PFO-CATMOD2

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Acer saccharinum</u> | | <u>15</u> | <u>Y</u> | <u>FACW</u> |
| 2. <u>Acer rubrum</u> | | <u>15</u> | <u>Y</u> | <u>FAC</u> |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>30</u> | | = Total Cover |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Acer saccharinum</u> | | <u>20</u> | <u>Y</u> | <u>FACW</u> |
| 2. <u>Acer rubrum</u> | | <u>15</u> | <u>Y</u> | <u>FAC</u> |
| 3. <u>Ulmus americana</u> | | <u>15</u> | <u>Y</u> | <u>FACW</u> |
| 4. <u>Fraxinus pennsylvanica</u> | | <u>10</u> | <u>N</u> | <u>FACW</u> |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>60</u> | | = Total Cover |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Leersia oryzoides</u> | | <u>40</u> | <u>Y</u> | <u>Obl</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>40</u> | | = Total Cover |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | | = Total Cover |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index is $\geq 3.0^1$

☒ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☒ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant - passes the dominance test.

SOIL

Sampling Point: W002-PFO-CATM002

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
- ☐ Thin Dark Surface (S9) (**MLRA 147, 148**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
- ☐ Umbric Surface (F13) (**MLRA 136, 122**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 148**)
- ☐ Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
(MLRA 136, 147)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

Soil Description Remarks:

Meets F3.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/7/2017
 Applicant/Owner: AEP State: OH Sampling Point: W002-PFO-CATMOD2-UPL
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%) 0/
 Subregion (LRR or MLRA): LRR Lat: 40.713739 Long: -81.414767 Datum: NAD83
 Soil Map Unit Name: Bhh7F1-Bethesda Channery loam, 25 to 70.1 slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks: Upland data point for W002-PFO-CATMOD2.
Data point taken on coal spoil pile with transmission line ROW.

HYDROLOGY

| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) |
|--|---|--|
| <u>Primary Indicators (minimum of one is required, check all that apply)</u> | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Iron Deposits (B5) | | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Aquatic Fauna (B13) | | <input type="checkbox"/> Microtopographic Relief (D4) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|-----------------------------|------------------------------|--|--------------------------------------|
| Surface Water Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Water Table Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Saturation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| (includes capillary fringe) | | | |

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology not present.

VEGETATION - Use scientific names of plants.

Sampling Point: W002-PFO-CATMOD2-UPL

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>0</u> | = Total Cover | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Bubalus allegheniensis</u> | | <u>50</u> | <u>Y</u> | <u>FACU</u> |
| 2. <u>Frangula alnus</u> | | <u>10</u> | <u>N</u> | <u>FAC</u> |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>60</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|------------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Solidago canadensis</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. <u>Daucus carota</u> | | <u>10</u> | <u>Y</u> | <u>FACU</u> |
| 3. <u>Erechtites hieracifolius</u> | | <u>10</u> | <u>Y</u> | <u>FACU</u> |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>35</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes ☐ No ☒

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

Upland veg is dominant.

SOIL

Sampling Point: W002-PFO-CATMOD2-VPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

| | | |
|---------------|-----|--|
| Hydric | | |
| Soil Present? | Yes | No <input checked="" type="checkbox"/> |

Soil Description Remarks:

Remarks: Hydric Soils not present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/7/2017
 Applicant/Owner: AEF State: OH Sampling Point: W003-PEM-CAT2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.713913 Long: -81.419208 Datum: NAD83
 Soil Map Unit Name: Lac Latham Silt loam, 8 to 15% slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |

Remarks: Wetland data point for W003-PEM-CAT2.
Data point taken within transmission Line ROW.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

| | |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

| |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|------------------------|---|-----------------------------|----------------------------|
| Surface Water Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>16"</u> |
| Water Table Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>10"</u> |
| Saturation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>0</u> |

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology Indicators are A1, A3, C1, C3, D2 and D5.

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>0</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>0</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|---------------------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>Typha x glauca</u> | | <u>40</u> | <u>Y</u> | <u>Obl</u> |
| 2. | <u>Juncus effusus</u> | | <u>15</u> | <u>N</u> | <u>FACW</u> |
| 3. | <u>Panicum sagittatum</u> | | <u>15</u> | <u>N</u> | <u>Obl</u> |
| 4. | <u>Scirpus cyperinus</u> | | <u>10</u> | <u>N</u> | <u>FACW</u> |
| 5. | <u>Carex lurida</u> | | <u>10</u> | <u>N</u> | <u>Obl</u> |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>90</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| | |
|----------------------|---------------------|
| Total % Cover of: | Multiply by: |
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant - passes the rapid test and dominance test.

SOIL

Sampling Point: W003-PEM-CAT2

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ✓ ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

| | | |
|---------------|---|-----------------------------|
| Hydric | | |
| Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

Soil Description Remarks:

Meets F2

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/17/2017
 Applicant/Owner: AEP State: OH Sampling Point: W003-PEM-CAT2-UP
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): convex Slope (%) 15%
 Subregion (LRR or MLRA): LRR Lat: 40.714128 Long: -81.419053 Datum: NAD83
 Soil Map Unit Name: LaC-Latham silt loam, 8 to 15% Slope NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil YES, or Hydrology YES significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil YES, or Hydrology YES naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks: Upland data for W003-PEM-CAT2
Data point taken on coal spoilpile with transmission line ROW.
Unreclaimed Stripe mine site.

HYDROLOGY

| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) |
|--|---|--|
| <u>Primary Indicators (minimum of one is required, check all that apply)</u> | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Iron Deposits (B5) | | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Aquatic Fauna (B13) | | <input type="checkbox"/> Microtopographic Relief (D4) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):
 Water Table Present? Yes ☐ No ☒ Depth (inches):
 Saturation Present? Yes ☐ No ☒ Depth (inches):
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology is not present.

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|----------------|--------------------------|------------------|-------------------|------------------|--|
| 1. <u>none</u> | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | <u>0</u> | = Total Cover | | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|-----------------------|--------------------------|------------------|-------------------|------------------|--|
| 1. <u>none</u> | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | <u>0</u> | = Total Cover | | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|-------------------------------|-------------------------|------------------|-------------------|------------------|--|
| 1. <u>Solidago canadensis</u> | | <u>20</u> | <u>✓</u> | <u>FACU</u> | |
| 2. <u>Cirsium arifolius</u> | | <u>15</u> | <u>✓</u> | <u>FACU</u> | |
| 3. <u>Setaria viridis</u> | | <u>15</u> | <u>✓</u> | <u>FACU</u> | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | <u>50</u> | = Total Cover | | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--------------------|--------------------------|------------------|-------------------|------------------|--|
| 1. <u>none</u> | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | <u>0</u> | = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|---------------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- _____ 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0¹
- _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Upland veg is dominant.

SOIL

Sampling Point: W003-PEM-CAT2-VPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
- ___ Thin Dark Surface (S9) (**MLRA 147, 148**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
- ___ Umbric Surface (F13) (**MLRA 136, 122**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 148**)
- ___ Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

| | | |
|---------------|-----|--|
| Hydric | | |
| Soil Present? | Yes | No <input checked="" type="checkbox"/> |

Soil Description Remarks:

Hydric Soils not present - Unreclaimed Strip mine - Soil sample taken on spoil pile.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/8/2017
 Applicant/Owner: ARP State: OH Sampling Point: W005-PEM-CATMOD2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 01
 Subregion (LRR or MLRA): LRR Lat: 40.714243 Long: -81.420188 Datum: NAD83
 Soil Map Unit Name: LaC-Lathem Siltloam, 8 to 15' Slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Remarks: <u>Wetland data for W005-PEM-CATMOD2</u> <u>Data point taken within riparian of perennial stream.</u> | | | | | |

HYDROLOGY

| | | |
|--|--|--|
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | |
| Remarks: <u>Wetland hydrology indicators are A3, C3, D2 and D5.</u> | | |

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>0</u> | = Total Cover | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>0</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Typha angustifolia</u> | | <u>15</u> | <u>Y</u> | <u>Obl</u> |
| 2. <u>Impatiens capensis</u> | | <u>30</u> | <u>Y</u> | <u>FACW</u> |
| 3. <u>Onoclea sensibilis</u> | | <u>15</u> | <u>Y</u> | <u>FACW</u> |
| 4. <u>Eupatorium perfoliatum</u> | | <u>10</u> | <u>N</u> | <u>FACW</u> |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>70</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant passes the dominance test and rapid test.

SOIL

Sampling Point: W005-PEM-CATMOO2

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

[†]Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) (**LRR N**)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

Soil Description Remarks:

Meets F3 and All.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/8/2017
 Applicant/Owner: ALP State: OH Sampling Point: WOOS-PEM-CATMOD2-UP
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): convex Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.714091 Long: -81.420169 Datum: NAD 83
 Soil Map Unit Name: LAC-latham Silt loam, 8 to 15% Slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Remarks: <u>Upland data for WOOS-PEM-CATMOD2,</u> <u>Data point taken in forested area along perennial stream.</u> | | | | | |

HYDROLOGY

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |

Remarks: Wetland hydrology is not present.

VEGETATION - Use scientific names of plants.

Sampling Point: W005-PEM-CATMOD2-UPL

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|---------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Quercus rubra</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Carya cordiformis</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 3. | <u>Magnolia acuminata</u> | | <u>10</u> | <u>Y</u> | <u>FACU</u> |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | <u>40</u> | | = Total Cover |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|---------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Cornus florida</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Rosa multiflora</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 3. | <u>Fraxinus americana</u> | | <u>10</u> | <u>N</u> | <u>FACU</u> |
| 4. | <u>Prunus serotina</u> | | <u>10</u> | <u>N</u> | <u>FACU</u> |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | <u>55</u> | | = Total Cover |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|---------------------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>Alliaria petiolata</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | <u>15</u> | | = Total Cover |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|------------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Parthenocissus quinquefolia</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | <u>15</u> | | = Total Cover |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|---|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) <u> </u> (B) <u> </u> |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No ✓

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

Upland veg is dominant.

Sampling Point: W005-PEM-CATMOD2-VPL

[illegible]

²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147,148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

Restrictive Layer (if observed):

Depth (inches): _____

Hydric
Soil Present? Yes ☐ No ☒

Hydric Soils not present

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/8/2017
 Applicant/Owner: AEP State: OH Sampling Point: W006-PEM-CAT2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.711594 Long: -81.416579 Datum: NAD83
 Soil Map Unit Name: Sb-Sebring Silt loam, 2 to 6% slopes NWI classification: PEMIC
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |

Remarks: Wetland data point for W006-PEM-CAT2.
Data point taken within open transmission ROW.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

| | |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

| |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|------------------------|---|-----------------------------|---------------------------|
| Surface Water Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>1"</u> |
| Water Table Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>8"</u> |
| Saturation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>0</u> |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology indicators are A1, A3, C3, D2 and D5.

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>0</u> | = Total Cover | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>0</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|------------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Typha x glauca</u> | | <u>30</u> | <u>Y</u> | <u>OBL</u> |
| 2. <u>Juncus effusus</u> | | <u>20</u> | <u>Y</u> | <u>FACW</u> |
| 3. <u>Erechtites hieracifolius</u> | | <u>10</u> | <u>N</u> | <u>FACU</u> |
| 4. <u>Panicum sagittatum</u> | | <u>15</u> | <u>N</u> | <u>OBL</u> |
| 5. <u>Leersia oryzoides</u> | | <u>15</u> | <u>N</u> | <u>OBL</u> |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>90</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant - passes the dominance test.

SOIL

Sampling Point: W1006-PEM-CATZ

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147,148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) |

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

Soil Description Remarks:

Meets F2

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/8/2017
 Applicant/Owner: AEF State: OH Sampling Point: W006-PEM-CATZ-UPL
 Investigator(s): RLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.710827 Long: -81.416133 Datum: NAD83
 Soil Map Unit Name: Sb-Sebring Silty loam, 0 to 2.7 slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks: Upland data for W006-PEM-CATZ and W010-PEM-CATZ.
Data point taken within maintained transmission ROW.

HYDROLOGY

| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) |
|--|---|--|
| <u>Primary Indicators (minimum of one is required, check all that apply)</u> | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Iron Deposits (B5) | | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Aquatic Fauna (B13) | | <input type="checkbox"/> Microtopographic Relief (D4) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|------------------------|------------------------------|--|--------------------------------------|
| Surface Water Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Water Table Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Saturation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology is not present.

VEGETATION - Use scientific names of plants.

Sampling Point: W0010-PEM-CATZ-UPL

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>0</u> | = Total Cover | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Rubus allegheniensis</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>15</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Dactylis glomerata</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 2. <u>Erechtites hieracifolius</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 3. <u>Polystichum acrostichoides</u> | | <u>10</u> | <u>N</u> | <u>FACU</u> |
| 4. <u>Achillea millefolium</u> | | <u>15</u> | <u>N</u> | <u>FACU</u> |
| 5. <u>Setaria viridis</u> | | <u>15</u> | <u>N</u> | <u>FACU</u> |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>80</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|---------------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- _____ 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0¹
- _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Upland veg is dominant.

SOIL

Sampling Point: W006-PEM-CAT2-VAL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ 2 cm Muck (A10) (**LRR N**)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

✓

Soil Description Remarks:

Hydric Soils are not present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/11/2017
 Applicant/Owner: AEP State: OH Sampling Point: W007-PEM-CAT2
 Investigator(s): RLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): BR Lat: 40.713045 Long: -81.415826 Datum: NAD 83
 Soil Map Unit Name: GdB-Gilpin Silty loam, 3 to 8% Slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |

Remarks: Wetland data point for W007-PEM-CAT2
Data point taken in wooded area near Intermittent Stream.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | | | | |
|------------------------|---|-----------------------------|----------------------------|----------------------------|---|-----------------------------|
| Surface Water Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>25"</u> | Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Water Table Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>8</u> | | | |
| Saturation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>0</u> | | | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology Indicators are A1, A3, C3, D2 and D5.

VEGETATION - Use scientific names of plants.

Sampling Point: W007-PEM-CAT2

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>0</u> | = Total Cover | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Acer rubrum</u> | | <u>5</u> | <u>Y</u> | <u>FAC</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>5</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Leersia virginica</u> | | <u>75</u> | <u>Y</u> | <u>FACW</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>75</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☒ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg. is dominant - passes the dominance test.

SOIL

Sampling Point: W007-PEM-CATZ

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

_____ Histosol (A1)
 _____ Histic Epipedon (A2)
 _____ Black Histic (A3)
 _____ Hydrogen Sulfide (A4)
 _____ Stratified Layers (A5)
 _____ 2 cm Muck (A10) (**LRR N**)
 _____ Depleted Below Dark Surface (A11)
 _____ Thick Dark Surface (A12)
 _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
 _____ Sandy Gleyed Matrix (S4)
 _____ Sandy Redox (S5)
 _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

Soil Description Remarks:

Meets F3.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/11/2017
 Applicant/Owner: AF State: OH Sampling Point: W007-PEM-CAT2-UP
 Investigator(s): KLIV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.713053 Long: -81.415920 Datum: NAD 83
 Soil Map Unit Name: GdB-Gilpin Silt loam, 3 to 8% Slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks: Upland data for W007-PEM-CAT2.
Data point taken in forested area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

| | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

| |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|------------------------|------------------------------|--|--------------------------------------|
| Surface Water Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Water Table Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Saturation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology not present.

VEGETATION - Use scientific names of plants.

Sampling Point: W007-PEM-CAT2-UPL

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|---------------------------|--------------------------|-------------------------|-------------------|------------------|
| 1. <u>Prunus serotina</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 2. <u>Quercus bicolor</u> | | <u>5</u> | <u>Y</u> | <u>FAW</u> |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | <u>25</u> | | |
| | | <u>25</u> = Total Cover | | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------------|--------------------------|-------------------------|-------------------|------------------|
| 1. <u>Sasatras albidum</u> | | <u>10</u> | <u>N</u> | <u>FACU</u> |
| 2. <u>Fraxinus americana</u> | | <u>10</u> | <u>N</u> | <u>FACU</u> |
| 3. <u>Rubus allegheniensis</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 4. <u>Quercus rubra</u> | | <u>15</u> | <u>N</u> | <u>FACU</u> |
| 5. <u>Acer rubrum</u> | | <u>15</u> | <u>N</u> | <u>FAC</u> |
| 6. <u>Rosa multiflora</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | <u>90</u> | | |
| | | <u>90</u> = Total Cover | | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|-------------------------|------------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | <u>0</u> | | |
| | | <u>0</u> = Total Cover | | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | <u>0</u> | | |
| | | <u>0</u> = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|--------------------------|----------------------------|
| OBL species <u>1</u> | x 1 = <u>1</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>0</u> | x 3 = <u>0</u> |
| FACU species <u>4</u> | x 4 = <u>16</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>16</u> | (A) <u>16</u> (B) <u>4</u> |

Prevalence Index = B/A = 0.25

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No ✓

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

Upland veg is dominant.

SOIL

Sampling Point: W007-PEM-CATZ-UA

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric
Soil Present? Yes ☐ No ☒

Soil Description Remarks:

Hydric Soils not present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/11/2017
 Applicant/Owner: AEP State: OH Sampling Point: WOODS-PEM-CATZ
 Investigator(s): RLV Section, Township, Range: PIKE Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 01
 Subregion (LRR or MLRA): LRR Lat: 40.712198 Long: -81.416012 Datum: NAD83
 Soil Map Unit Name: GdC-Gilpin Silt loam - 8 to 15% Slopes NWI classification: NA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |

Remarks: Wetland data for WOODS-PEM-CATZ.
Data point taken a edge of transmission line ROW and at intermittent stream.

HYDROLOGY

| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) | |
|--|--|---|--|
| <u>Primary Indicators (minimum of one is required, check all that apply)</u> | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input checked="" type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Iron Deposits (B5) | | <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | | <input checked="" type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) | |

| | | | |
|-----------------------------|---|--|------------|
| Field Observations: | | | |
| Surface Water Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): | <u>10"</u> |
| Water Table Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Depth (inches): | <u>0</u> |
| Saturation Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Depth (inches): | <u>0</u> |
| (includes capillary fringe) | | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology Indicators are A3, C3, D2 and D5.

VEGETATION - Use scientific names of plants.

Sampling Point: W008-PEM-CAT2

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|--------------------|--------------------------|---------------------|----------------------|---------------------|
| 1. | <u>Acer rubrum</u> | | <u>10</u> | <u>Y</u> | <u>FAC</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>10</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|-------------|--------------------------|---------------------|----------------------|---------------------|
| 1. | <u>None</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>0</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|------------------------------|-------------------------|---------------------|----------------------|---------------------|
| 1. | <u>Leersia oryzoides</u> | | <u>10</u> | <u>N</u> | <u>Obl</u> |
| 2. | <u>Leersia virginica</u> | | <u>10</u> | <u>N</u> | <u>FACW</u> |
| 3. | <u>Impatiens capensis</u> | | <u>20</u> | <u>N</u> | <u>FACW</u> |
| 4. | <u>Panicum chindestinum</u> | | <u>10</u> | <u>N</u> | <u>FACW</u> |
| 5. | <u>Persicaria sagittatum</u> | | <u>15</u> | <u>Y</u> | <u>Obl</u> |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>65</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|---------------------|----------------------|---------------------|
| 1. | <u>None</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|----------------------|---------------------|
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant - passes the dominance test.

SOIL

Sampling Point: WOOB-PEM-CAT2

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

_____ Histosol (A1)
 _____ Histic Epipedon (A2)
 _____ Black Histic (A3)
 _____ Hydrogen Sulfide (A4)
 _____ Stratified Layers (A5)
 _____ 2 cm Muck (A10) (**LRR N**)
 _____ Depleted Below Dark Surface (A11)
 _____ Thick Dark Surface (A12)
 _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
 _____ Sandy Gleyed Matrix (S4)
 _____ Sandy Redox (S5)
 _____ Stripped Matrix (S6)

- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric
Soil Present? Yes ☒ No ☐

Soil Description Remarks:

Meets F3

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/11/2017
 Applicant/Owner: ACP State: OH Sampling Point: W008-PEM-CAT2-VPL
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): convex Slope (%) 01
 Subregion (LRR or MLRA): LRR Lat: 40.712146 Long: -81.416007 Datum: NAD 83
 Soil Map Unit Name: GdC - Gilpin Silt loam, 8 to 15 ft. Slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks: Upland data for W008-PEM-CAT2.
Data point taken at edge of transmission line ROW. in wooded area.

HYDROLOGY

| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) |
|--|---|--|
| <u>Primary Indicators (minimum of one is required, check all that apply)</u> | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Iron Deposits (B5) | | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Aquatic Fauna (B13) | | <input type="checkbox"/> Microtopographic Relief (D4) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

| | | | | |
|--|---|-----------------|----------------------|--|
| Field Observations: | | | | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Surface Water Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): | <input type="text"/> | |
| Water Table Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): | <input type="text"/> | |
| Saturation Present? (includes capillary fringe) | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): | <input type="text"/> | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology is not present.

VEGETATION - Use scientific names of plants.

Sampling Point: WOOB-PEM-CAT2-UPL

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Acer rubrum</u> | | <u>10</u> | <u>Y</u> | <u>FAC</u> |
| 2. <u>Pinus serotina</u> | | <u>10</u> | <u>Y</u> | <u>FACW</u> |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | <u>20</u> | | |
| | | = Total Cover | | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Cornus florida</u> | | <u>15</u> | <u>Y</u> | <u>FACW</u> |
| 2. <u>Acer rubrum</u> | | <u>10</u> | <u>N</u> | <u>FAC</u> |
| 3. <u>Frangula alnus</u> | | <u>15</u> | <u>Y</u> | <u>FAC</u> |
| 4. <u>Rubus allegheniensis</u> | | <u>15</u> | <u>Y</u> | <u>FACW</u> |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | <u>55</u> | | |
| | | = Total Cover | | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Panicum clandestinum</u> | | <u>5</u> | <u>Y</u> | <u>FAC</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | <u>5</u> | | |
| | | = Total Cover | | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|---------------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Toxicodendron radicans</u> | | <u>15</u> | <u>Y</u> | <u>FAC</u> |
| 2. <u>Parthenocissus quinquefolia</u> | | <u>10</u> | <u>Y</u> | <u>FACW</u> |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | <u>25</u> | | |
| | | = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------|---------------------|
| Total % Cover of: | Multiply by: |
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |
| Prevalence Index = B/A = _____ | |

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- _____ 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0¹
- _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Upland veg is dominant.

SOIL

Sampling Point: WOODS-PEM-CATZ-UPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147,148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

✓

Soil Description Remarks:

Hydric Soils not present

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/11/2017
 Applicant/Owner: AEP State: OH Sampling Point: W009-PEM-CATZ
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.712173 Long: -81.414770 Datum: NAD 83
 Soil Map Unit Name: GdG-Gilpin Silt loam, 8 to 15% slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |

Remarks: Wetland data point for W009-PEM-CATZ
Data point taken within transmission line ROW.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):
 Water Table Present? Yes ☐ No ☒ Depth (inches):
 Saturation Present? Yes ☐ No ☒ Depth (inches):
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology indicators are C3, D2 and D5.

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>None</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>0</u> | = Total Cover | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>None</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>0</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Carex lurida</u> | | <u>50</u> | <u>Y</u> | <u>Old</u> |
| 2. <u>Scirpus atrovirens</u> | | <u>15</u> | <u>N</u> | <u>FACW</u> |
| 3. <u>Echinochloa crus-galli</u> | | <u>15</u> | <u>N</u> | <u>FAC</u> |
| 4. <u>Panicum clandestinum</u> | | <u>10</u> | <u>N</u> | <u>FAC</u> |
| 5. <u>Juncus effusus</u> | | <u>10</u> | <u>N</u> | <u>FACW</u> |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>100</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>None</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100/ (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☒ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

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

Wetland veg is dominant-passes the dominance test.

SOIL

Sampling Point: W009-PERM-CAT2

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

| | | |
|---------------|---|-----------------------------|
| Hydric | | |
| Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

Soil Description Remarks:

Meets F2.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/11/2017
 Applicant/Owner: AEP State: OH Sampling Point: W009-PEM-CAT2-UP
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): convex Slope (%) 10.1
 Subregion (LRR or MLRA): LRR Lat: 40.712143 Long: -81.414608 Datum: NAD83
 Soil Map Unit Name: GdC-Gilpin S.H loam, 8 to 15% Slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO Soil NO or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO Soil NO or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|--|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Remarks: <u>Upland data for W009-PEM-CAT2 (1)</u> <u>Data point taken with transmission line ROW.</u> | | | | | |

HYDROLOGY

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |

Remarks: Wetland hydrology is not present.

VEGETATION - Use scientific names of plants.

Sampling Point: W009-PEM-LAT2-UPL

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | = Total Cover | | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Rubus allegheniensis</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>15</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|------------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Dactylis glomerata</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 2. <u>Solidago canadensis</u> | | <u>15</u> | <u>N</u> | <u>FACU</u> |
| 3. <u>Achillea millefolium</u> | | <u>20</u> | <u>N</u> | <u>FACU</u> |
| 4. <u>Panicum clandestinum</u> | | <u>15</u> | <u>N</u> | <u>FAC</u> |
| 5. <u>Erechtites hieracifolius</u> | | <u>10</u> | <u>N</u> | <u>FACU</u> |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>90</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

| | |
|----------------------|---------------------|
| Total % Cover of: | Multiply by: |
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- _____ 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0¹
- _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Upland veg is dominant.

SOIL

Sampling Point: W009-PEM-CATZ-UPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|---|--|
| ___ Histosol (A1) | ___ Dark Surface (A7) |
| ___ Histic Epipedon (A2) | ___ Polyvalue Below Surface (S8) (MLRA 147, 148) |
| ___ Black Histic (A3) | ___ Thin Dark Surface (S9) (MLRA 147, 148) |
| ___ Hydrogen Sulfide (A4) | ___ Loamy Gleyed Matrix (F2) |
| ___ Stratified Layers (A5) | ___ Depleted Matrix (F3) |
| ___ 2 cm Muck (A10) (LRR N) | ___ Redox Dark Surface (F6) |
| ___ Depleted Below Dark Surface (A11) | ___ Depleted Dark Surface (F7) |
| ___ Thick Dark Surface (A12) | ___ Redox Depressions (F8) |
| ___ Sandy Mucky Mineral (S1) (LRR N, MLRA 147,148) | ___ Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| ___ Sandy Gleyed Matrix (S4) | ___ Umbric Surface (F13) (MLRA 136, 122) |
| ___ Sandy Redox (S5) | ___ Piedmont Floodplain Soils (F19) (MLRA 148) |
| ___ Stripped Matrix (S6) | ___ Red Parent Material (F21) (MLRA 127, 147) |

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric.

Soll Present?

Yes

No

Soll Description Remarks:

Hydric Soils are not present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/11/2017
 Applicant/Owner: AEP State: OH Sampling Point: W010-PEM-CAT2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.710975 Long: -81.415971 Datum: NAD 83
 Soil Map Unit Name: LcF2-Licking Silt loam-12 to 25% Slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|--|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Remarks: <u>Wetland data for W010-PEM-CAT2</u> <u>Data point taken in forested (immature) area.</u> | | | | | |

HYDROLOGY

| | | | |
|---|--|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>—</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |

Remarks: Wetland hydrology indicators are A3, D2 and D5.

VEGETATION - Use scientific names of plants.

Sampling Point: W010-PEM-CAT2

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Acer rubrum</u> | | <u>10</u> | <u>Y</u> | <u>FAC</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>10</u> | = Total Cover | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|---------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Ulmus americana</u> | | <u>10</u> | <u>Y</u> | <u>FACW</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>10</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Telesia arizoides</u> | | <u>40</u> | <u>Y</u> | <u>OBL</u> |
| 2. <u>Impatiens capensis</u> | | <u>20</u> | <u>Y</u> | <u>FACW</u> |
| 3. <u>Onoclea sensibilis</u> | | <u>10</u> | <u>N</u> | <u>FACW</u> |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>70</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant - passes the dominance test.

SOIL

Sampling Point: W010-PEM-CATZ

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) (**LRR N**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

| | | |
|----------------------|------------|-----------|
| Hydric | | |
| Soil Present? | Yes | No |
| | ✓ | |

Soil Description Remarks:

Meets F2.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: ACP State: OH Sampling Point: W011-PFO-CATMOD2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.708779 Long: -81.414829 Datum: NAD 83
 Soil Map Unit Name: LoB-Loudonville Silty loam, 2 to 6% slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |

Remarks:

Wetland data for W011-PFO-CATMOD2
 Data point taken with in forested area next to perennial stream.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

| | |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

| |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|------------------------|---|-----------------------------|----------------------------|
| Surface Water Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>50"</u> |
| Water Table Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>3"</u> |
| Saturation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>0</u> |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland Hydrology Indicators are A1, A3, C3, D2 and D5.

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Ulmus americanus</u> | | <u>20</u> | <u>y</u> | <u>FACW</u> |
| 2. | <u>Acer rubrum</u> | | <u>15</u> | <u>y</u> | <u>FAC</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>35</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|-------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Ulmus americanus</u> | | <u>15</u> | <u>y</u> | <u>FACW</u> |
| 2. | <u>Acer rubrum</u> | | <u>25</u> | <u>y</u> | <u>FAC</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>40</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-----------------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>Sphagnum spp.*</u> | | <u>30</u> | <u>y</u> | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>30</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| | |
|----------------------|---------------------|
| Total % Cover of: | Multiply by: |
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

wetland veg is dominant - passes the dominance test.
 *Sphagnum spp. could not be identified to species level and is not included in the calculation.

SOIL

Sampling Point: W011-PFO-CATMOD2

Soil Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

[illegible]¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

| | | |
|-------------------------|---|-----------------------------|
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
|-------------------------|---|-----------------------------|

Soil Description Remarks:

Meets F2 and F3.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: ACP State: OH Sampling Point: Well-PFO-CATMOB2-UPL
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): convex Slope (%) 20.1
 Subregion (LRR or MLRA): LRR Lat: 40.708705 Long: -81.414806 Datum: NAD83
 Soil Map Unit Name: LoB-Touadonville Silt loam, 2 to 6 ft. Slope NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|--|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Remarks: <u>Upland data point for</u> <u>Data taken within forested area.</u> | | | | | |

HYDROLOGY

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |

Remarks: Wetland hydrology is not present.

VEGETATION - Use scientific names of plants.

Sampling Point: W011-PFO-CATMOD2-UPL

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|--------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Quercus rubra</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Fagus grandifolia</u> | | <u>25</u> | <u>Y</u> | <u>FACU</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>40</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Fagus grandifolia</u> | | <u>10</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>10</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-----------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>Polystichum acrostichoides</u> | | <u>10</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>10</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|------------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Parthenocissus quinquefolia</u> | | <u>10</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>10</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

Upland veg is dominant.

SOIL

Sampling Point: W011-PFO-CATMOD2-UPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

Soil Description Remarks:

Hydric Soils not present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: AEF State: OH Sampling Point: W012-PFO-CAT1
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0%
 Subregion (LRR or MLRA): LRR Lat: 40.707905 Long: -81.416495 Datum: NAD83
 Soil Map Unit Name: BhPXE1-Bethesda-PHS Surface Mine, 25 to 70% Slopes - Unreclaimed Soil classification: NA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |

Remarks:

Wetland data for W012-PFO-CAT1
 Data taken within forested area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input checked="" type="checkbox"/> Surface Soil Cracks (B6) |
| <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | |
|------------------------|---|--------------------------------------|
| Surface Water Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Water Table Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Saturation Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology Indicators are B9, B8, D2.

VEGETATION - Use scientific names of plants.

Sampling Point: W012-PFO-CAT1

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Acer rubrum</u> | | <u>10</u> | <u>Y</u> | <u>FAC</u> |
| 2. | <u>Ulmus americana</u> | | <u>5</u> | <u>Y</u> | <u>FACW</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>15</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Acer rubrum</u> | | <u>10</u> | <u>Y</u> | <u>FAC</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>10</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>0</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------|---------------------|
| Total % Cover of: | Multiply by: |
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |
| Prevalence Index = B/A = _____ | |

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant - passes the dominance test.

SOIL

Sampling Point: W012-PFO-CAT1

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

Soil Description Remarks:

Meets F2

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: ATP State: OH Sampling Point: W012-PFO-CAT1-UPL
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): convex Slope (%) 20%
 Subregion (LRR or MLRA): LRR Lat: 40.708095 Long: -81.416555 Datum: NAD83
 Soil Map Unit Name: BhpXFI-Bethesda-Pits surface mine - 25 to 70% Slopes NWI classification: NA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks:

Upland data for W012-PFO-CAT1 and W013-PFO-CATMOD2.
 Data point taken within forested area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

| | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

| |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|------------------------|------------------------------|--|--------------------------------------|
| Surface Water Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Water Table Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Saturation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology is not present.

VEGETATION - Use scientific names of plants.

Sampling Point: W012-PFO-CAT1-UPL

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Quercus rubra</u> | | <u>30</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Populus grandidentata</u> | | <u>10</u> | <u>Y</u> | <u>FACU</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>40</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|---------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Fraxinus americana</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Quercus rubra</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>35</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>0</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|----------------------|---------------------|
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- _____ 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0¹
- _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes _____ No ✓

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

Upland veg is dominant.

SOIL

Sampling Point: W012-PFO-CAT1-VPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Soil Description Remarks:

Hydric Soil not present. - Soil sample taken on coal spoil pile.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: ATP State: OH Sampling Point: W013-PFO-CATMOD2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): Concave Slope (%) 0.1
 Subregion (LRR or MLRA): LBB Lat: 40.708263 Long: -81.416192 Datum: NAD 83
 Soil Map Unit Name: B01PXT-Bethesda Pits surface mine, 25 to 70.1 Slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |

Remarks: Wetland data for W013-PFO-CATMOD2.
 Data point taken within forested area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input checked="" type="checkbox"/> Surface Soil Cracks (B6) |
| <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1"
 Water Table Present? Yes ☒ No ☐ Depth (inches): 0
 Saturation Present? Yes ☒ No ☐ Depth (inches): 0
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology indicators are A1, A3, B9, B8, and D2.

VEGETATION - Use scientific names of plants.

Sampling Point: W013-PFO-CATMOD 2

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|---------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Acer rubrum</u> | | <u>15</u> | <u>Y</u> | <u>FAC</u> |
| 2. | <u>Quercus imbricaria</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>30</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Acer rubrum</u> | | <u>10</u> | <u>Y</u> | <u>FAC</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>10</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>0</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is present - passes the dominance test.

SOIL

Sampling Point: W013-PFO-CATMOD2

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (MLRA 147, 148)
- ☐ Thin Dark Surface (S9) (MLRA 147, 148)
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- ☐ Umbric Surface (F13) (MLRA 136, 122)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 148)
- ☐ Red Parent Material (F21) (MLRA 127, 147)

indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (MLRA 147)
☐ Coast Prairie Redox (A16) (MLRA 147, 148)
☐ Piedmont Floodplain Soils (F19)
☐ (MLRA 136, 147)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present? Yes ☒ No ☐

Soil Description Remarks:

Meets F2.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: ATP State: OH Sampling Point: W014-PEM-CAT2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.708485 Long: -81.413617 Datum: NAD83
 Soil Map Unit Name: BhPXF1-Bethesda-Pits surface mine, 25 to 70% slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|--|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Remarks: <u>Wetland data for W014-PEM-CAT2.</u> <u>Data point taken within forested area.</u> | | | | | |

HYDROLOGY

| | | |
|---|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> | | <u>Secondary Indicators (minimum of two required)</u> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> <input checked="" type="checkbox"/> Geomorphic Position (D2) Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (Includes capillary fringe) | | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | |

Remarks: Wetland hydrology Indicators are C3, D2 and D5.

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Acer rubrum</u> | | <u>15</u> | <u>Y</u> | <u>FAC</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>15</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|-----------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Fraxinus alnus</u> | | <u>10</u> | <u>Y</u> | <u>FAC</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>10</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-----------------------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>Phragmites australis</u> | | <u>75</u> | <u>Y</u> | <u>FACW</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>75</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☒ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant. -passes dominance test

SOIL

Sampling Point: W014-PEM-CAT2

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If observed):

Type: _____

Depth (inches): _____

| | | | |
|---------------|-----|-------------------------------------|----|
| Hydric | | | |
| Soil Present? | Yes | <input checked="" type="checkbox"/> | No |

Soil Description Remarks:

Meets F3.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: AEP State: OH Sampling Point: W014-PEM-CAT2-VPL
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%) 0%
 Subregion (LRR or MLRA): LRR Lat: 40.708730 Long: -81.413489 Datum: NAD 83
 Soil Map Unit Name: BhPXFT-Bethesda-Pits surface mixe, 25 to 70% Slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks: Upland data for W014-PEM-CAT2.
Data point taken within forested area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

| | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

| |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|------------------------|------------------------------|--|--------------------------------------|
| Surface Water Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Water Table Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Saturation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology is not present.

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-----------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Acer rubrum</u> | | <u>15</u> | <u>Y</u> | <u>FAC</u> |
| 2. | <u>Acer saccharum</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 3. | <u>Quercus rubra</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>50</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|-----------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Fragaria alnus</u> | | <u>15</u> | <u>Y</u> | <u>FAC</u> |
| 2. | <u>Quercus rubra</u> | | <u>10</u> | <u>Y</u> | <u>FACU</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>25</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>0</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|----------------------|---------------------|
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- _____ 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0¹
- _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Upland veg is dominant.

SOIL

Sampling Point: W014-FEM-CAT2-VPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- _____ Dark Surface (S7)
- _____ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- _____ Thin Dark Surface (S9) **(MLRA 147, 148)**
- _____ Loamy Gleyed Matrix (F2)
- _____ Depleted Matrix (F3)
- _____ Redox Dark Surface (F6)
- _____ Depleted Dark Surface (F7)
- _____ Redox Depressions (F8)
- _____ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- _____ Umbric Surface (F13) **(MLRA 136, 122)**
- _____ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- _____ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (MLRA 147)
☐ Coast Prairie Redox (A16) (MLRA 147, 148)
☐ Piedmont Floodplain Soils (F19)
☐ (MLRA 136, 147)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric
Soil Present? Yes ☐ No ☒

Soil Description Remarks:

Hydric Soils are not present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: ATP State: OH Sampling Point: WOIS-PEM-CATMOD2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.709988 Long: -81.412179 Datum: NAD 83
 Soil Map Unit Name: Bhh TFI-Bethesda Channery loam, 25 to 70 % slopes - highwall NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|--|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Remarks: <u>Wetland data for WOIS-PEM-CATMOD2.</u> <u>Data point taken within transmission line ROW.</u> <u>Entire area has been previously Strip mined.</u> | | | | | |

HYDROLOGY

| | | |
|--|--|---|
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | |

Remarks: Wetland hydrology Indicators are A1, A3, D2 and D5.

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|--------------------------|------------------|-------------------|------------------|--|
| 1. <u>none</u> | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | = Total Cover | | | |
| | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | |
| 1. <u>none</u> | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | = Total Cover | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | |
| 1. <u>Scirpus cyperinus</u> | | <u>15</u> | <u>Y</u> | <u>FACW</u> | |
| 2. <u>Leersia oryzoides</u> | | <u>60</u> | <u>Y</u> | <u>OBL</u> | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | <u>75</u> | = Total Cover | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | | |
| 1. <u>none</u> | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | <u>0</u> | = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|----------------------|---------------------|
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant passes the dominance test and rapid test.

SOIL

Sampling Point: W015-PEM-CATMOD2

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (MLRA 147, 148)
- ☐ Thin Dark Surface (S9) (MLRA 147, 148)
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- ☐ Umbric Surface (F13) (MLRA 136, 122)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 148)
- ☐ Red Parent Material (F21) (MLRA 127, 147)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

Soil Description Remarks:

Meets F2.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: ALP State: OH Sampling Point: WOIS-PEM-CATMOD2-UPR
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.710381 Long: -81.412545 Datum: NAD 83
 Soil Map Unit Name: BhhTf-Beltsda Channery loam, 25 to 70% Slopes, highwall NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks:
Upland data for WOIS-PEM-CATMOD2
Data point taken within Transmission Line ROW.
Entire site has been previously stripmined.

HYDROLOGY

| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) |
|--|---|--|
| <u>Primary Indicators (minimum of one is required, check all that apply)</u> | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Iron Deposits (B5) | | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Aquatic Fauna (B13) | | <input type="checkbox"/> Microtopographic Relief (D4) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):
 Water Table Present? Yes ☐ No ☒ Depth (inches):
 Saturation Present? Yes ☐ No ☒ Depth (inches):
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology indicators are not present.

VEGETATION - Use scientific names of plants.

Sampling Point: WD15-PEM-CATMOD2-UPL

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>None</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>0</u> | = Total Cover | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Rubus allegheniensis</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>20</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Danthonia spicata</u> | | <u>40</u> | <u>Y</u> | <u>FACU</u> |
| 2. <u>Echinochloa crus-galli</u> | | <u>10</u> | <u>Y</u> | <u>FAC</u> |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>50</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>None</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.1 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

Upland veg is dominant

SOIL

Sampling Point: W015-PEM-CATMOD2-VPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147,148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present? Yes No ☒

Soil Description Remarks:

Hydric Soils not present. - Soil sample was taken on coal spoil pile.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: ACP State: OH Sampling Point: W016-PEM-CAT2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 01
 Subregion (LRR or MLRA): LRR1 Lat: 40.712286 Long: -81.412418 Datum: NAD83
 Soil Map Unit Name: Bhh7F1-Bethesda Channery loam 25 to 70% Slopes - highwall NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |

Remarks:

Wetland data for W016-PEM-CAT2
 Data point taken in forested area - unreclaimed stripmine.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | |
|------------------------|---|--------------------------------------|
| Surface Water Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Water Table Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Saturation Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology Indicators are B9, C3, D2, D5.

VEGETATION - Use scientific names of plants.

Sampling Point: W0110-PEM-CAT2

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Acer rubrum</u> | | <u>10</u> | <u>Y</u> | <u>Fac</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>10</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>0</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|--------------------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>Leersia oryzoides</u> | | <u>20</u> | <u>Y</u> | <u>Obl</u> |
| 2. | <u>Bidens frondosa</u> | | <u>35</u> | <u>Y</u> | <u>FacW</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>55</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☒ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant - passes the dominance test.

SOIL

Sampling Point: WOLLE-PEM-CATZ

Soil Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
 _____ Histic Epipedon (A2)
 _____ Black Histic (A3)
 _____ Hydrogen Sulfide (A4)
 _____ Stratified Layers (A5)
 _____ 2 cm Muck (A10) (**LRR N**)
 _____ Depleted Below Dark Surface (A11)
 _____ Thick Dark Surface (A12)
 _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
 _____ Sandy Gleyed Matrix (S4)
 _____ Sandy Redox (S5)
 _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (MLRA 147, 148)
- ☐ Thin Dark Surface (S9) (MLRA 147, 148)
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- ☐ Umbric Surface (F13) (MLRA 136, 122)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 148)
- ☐ Red Parent Material (F21) (MLRA 127, 147)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

No

Soil Description Remarks: Meets F2.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: AFP State: OH Sampling Point: WO16-DEM-CAT2-0A
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%) 10%
 Subregion (LRR or MLRA): LRR Lat: 40.712452 Long: -81.412517 Datum: NAD 83
 Soil Map Unit Name: Bhh7E1-Bethesda Channery loam, 25 to 70% slopes-highwall NWI classification: NA
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks: Upland data for WO16-DEM-CAT2
Data taken within forested area - entire area has been previously strip mined.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):
 Water Table Present? Yes ☐ No ☒ Depth (inches):
 Saturation Present? Yes ☐ No ☒ Depth (inches):
 (Includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology is not present.

VEGETATION - Use scientific names of plants.

Sampling Point: W0110-PEM-CAT2-UPL

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Acer rubrum</u> | | <u>15</u> | <u>y</u> | <u>Fac</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | = Total Cover | | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Carya cordiformis</u> | | <u>15</u> | <u>y</u> | <u>FacU</u> |
| 2. | <u>Sassafras albidum</u> | | <u>15</u> | <u>y</u> | <u>FacU</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | <u>30</u> | | |
| | | | = Total Cover | | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | <u>0</u> | | |
| | | | = Total Cover | | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | <u>0</u> | | |
| | | | = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

| | |
|----------------------|---------------------|
| Total % Cover of: | Multiply by: |
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

_____ 1 - Rapid Test for Hydrophytic Vegetation

_____ 2 - Dominance Test is >50%

_____ 3 - Prevalence Index is ≤3.0¹

_____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Upland veg is dominant

SOIL

Sampling Point: W016-PEM-CAT2-UPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soii Present?

Yes

No

Soil Description Remarks:

Hydric Soils not present. - Soil sample taken on coal spoil pile

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: AEP State: OH Sampling Point: W017-PEM-CAT1
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 01
 Subregion (LRR or MLRA): LRR Lat: 40.713984 Long: -81.413483 Datum: NAD 83
 Soil Map Unit Name: Bhh A1-Bethesda Channery loam, 25 to 70% slopes - highwall NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |

Remarks:

Wetland data for W017-PEM-CAT1.
 Data point taken within maintained transmission ROW.
 Entire area has been previously strip mined.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

| | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

| |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|------------------------|------------------------------|--|--------------------------------------|
| Surface Water Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Water Table Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Saturation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |

(Includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology Indicators are C3, D2 and D5.

VEGETATION - Use scientific names of plants.

Sampling Point: W017-PEM-CAT1

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | <u>0</u> | = Total Cover | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>0</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Leersia oryzoides</u> | | <u>25</u> | <u>Y</u> | <u>Old FACW</u> |
| 2. <u>Scirpus atrovirens</u> | | <u>25</u> | <u>Y</u> | <u>FACW</u> |
| 3. <u>Phalaris arundinacea</u> | | <u>15</u> | <u>Y</u> | <u>FACW</u> |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>65</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant - passes the dominance test and rapid test.

SOIL

Sampling Point: W017-PEM-CAT1

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) **(MLRA 147)**
Coast Prairie Redox (A16) **(MLRA 147, 148)**
Piedmont Floodplain Soils (F19)
(MLRA 136, 147)
Very Shallow Dark Surface (TF12)
Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric

Soil Present?

Yes

✓

No

Soil Description Remarks:

Meets F2 and F3.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/12/2017
 Applicant/Owner: AFP State: OH Sampling Point: W017-PEM-CATI-UP
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): convex Slope (%) 15%
 Subregion (LRR or MLRA): LRR Lat: 40.714041 Long: -81.413654 Datum: NAD 83
 Soil Map Unit Name: Bhh7F Bethesda Channery loam, 25 to 70% slopes - highwall NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks: Upland data for W017-PEM-CATI..
Data point taken forested area. Entire site has been previously strip mined.

HYDROLOGY

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |

Remarks: Wetland hydrology indicators are not present.

VEGETATION - Use scientific names of plants.

Sampling Point: W017-PEM-CAT1-UPL

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Prunus serotina</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | <u>15</u> | | = Total Cover |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|---------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Rosa multiflora</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Fraxinus americana</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | <u>35</u> | | = Total Cover |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | <u>0</u> | | = Total Cover |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|------------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Parthenocissus quinquefolia</u> | | <u>10</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | <u>10</u> | | = Total Cover |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is $\leq 3.0^1$
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes ☐ No ☒

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

Upland veg is dominant.

Sampling Point: W017-PEM-CATI-VPL

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

| | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147,148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) |

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: _____

Depth (inches): _____

| | | |
|-------------------------|-----|--|
| Hydric Soil Present? | Yes | No <input checked="" type="checkbox"/> |
|-------------------------|-----|--|

Hydric Soils not present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/13/2017
 Applicant/Owner: APP State: OH Sampling Point: W018-PSS-CAT2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 01
 Subregion (LRR or MLRA): LRR Lat: 40.709510 Long: -81.418285 Datum: NAD83
 Soil Map Unit Name: Bhpst-Bethesda-Pits surface mine, 25 to 70% Slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|--|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Remarks: <u>Wetland data for W018-PSS-CAT2</u> <u>Data point taken within Stripmine pit.</u> | | | | | |

HYDROLOGY

| | | | |
|---|--|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required, check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>.50"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |

Remarks:
Wetland hydrology Indicators are A3, D2 and D5.

VEGETATION - Use scientific names of plants.

Sampling Point: W018-PSS-CAT2

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | = Total Cover | | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Fraxinus</u> | | <u>30</u> | <u>Y</u> | <u>FAC</u> |
| 2. <u>Sambucus nigra</u> | | <u>15</u> | <u>Y</u> | <u>FAC</u> |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>45</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|------------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Impatiens capensis</u> | | <u>30</u> | <u>Y</u> | <u>FACW</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>30</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>none</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☒ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0¹
- ☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

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

Wetland veg is dominant-passes the dominance test

SOIL

Sampling Point: W018-PSS-CATZ

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

| | | |
|-------------------------|---|-----------------------------|
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
|-------------------------|---|-----------------------------|

Soil Description Remarks:

Meets F2.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/13/2017
 Applicant/Owner: AEP State: OH Sampling Point: WOIB-PEM-CAT2
 Investigator(s): KCW Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.710782 Long: -81.419245 Datum: NAD83
 Soil Map Unit Name: BhpXT-Bethesda Pits, surface mine (25 to 70:1 Slopes) NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|--|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Remarks: <u>Wetland data point for WOIB-PEM-CAT2.</u> <u>Data point taken in old strip mine pit.</u> | | | | | |

HYDROLOGY

| | | | |
|--|--|--|--|
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required, check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe) | | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: <u>Wetland hydrology Indicators are C3, D2 and D5.</u> | | | |

VEGETATION - Use scientific names of plants.

Sampling Point: WO1B-PEM-CAT2

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
|---|--------------------------|------------------|-------------------|------------------|--|
| 1. <u>none</u> | | | | | Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) |
| 2. | | | | | Total Number of Dominant Species Across All Strata: <u>4</u> (B) |
| 3. | | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B) |
| 4. | | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| _____ = Total Cover | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | |
| 1. <u>Ulmus americana</u> | | <u>10</u> | <u>Y</u> | <u>FACW</u> | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 2. <u>Frangula alnus</u> | | <u>10</u> | <u>Y</u> | <u>FAC</u> | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| <u>20</u> = Total Cover | | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | |
| 1. <u>Scirpus cyperinus</u> | | <u>10</u> | <u>N</u> | <u>FACW</u> | Definitions of Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vines - All woody vines greater than 3.28 ft in height. |
| 2. <u>Carex lurida</u> | | <u>25</u> | <u>Y</u> | <u>OBL</u> | |
| 3. <u>Impatiens capensis</u> | | <u>20</u> | <u>Y</u> | <u>FACW</u> | |
| 4. <u>Persicaria sagittatum</u> | | <u>10</u> | <u>N</u> | <u>OBL</u> | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| <u>105</u> = Total Cover | | | | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | | |
| 1. <u>none</u> | | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| <u>0</u> = Total Cover | | | | | |

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

Wetland veg is dominant - passes dominance test.

SOIL

Sampling Point: W018-PEM-CAT2

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) (**LRR N**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (MLRA 147)
☐ Coast Prairie Redox (A16) (MLRA 147, 148)
☐ Piedmont Floodplain Soils (F19)
☐ (MLRA 136, 147)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If observed):

Type: _____

Depth (inches): _____

Hydric

Soli Present?

Yes

No

Soll Description Remarks:

Meets F2 and F3.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/13/2017
 Applicant/Owner: AEP State: OH Sampling Point: W018-PSS-CAT2-UP
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): convex Slope (%): 15%
 Subregion (LRR or MLBA): LRR Lat: 40.709573 Long: -81.418143 Datum: NAD83
 Soil Map Unit Name: BHXXF-Bethesda Pits surface mine, 25 to 70% Slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |

Remarks: Upland data for W018-PSS-CAT2 and W018-PEM-CAT2.
 Data point taken within forested area. Entire area has been previously strip mined.

HYDROLOGY

| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) | |
|---|---|--|--|
| Primary Indicators (minimum of one is required, check all that apply) | | | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) | <input type="checkbox"/> Surface Soil Cracks (B6) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Moss Trim Lines (B16) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Crayfish Burrows (C8) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Iron Deposits (B5) | | <input type="checkbox"/> Stunted or Stressed Plants (D1) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | | <input type="checkbox"/> Microtopographic Relief (D4) | |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) | |

| | | | |
|-----------------------------|---|------------------------------|--|
| Field Observations: | | Wetland Hydrology Present? | |
| Surface Water Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Water Table Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | |
| Saturation Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | |
| (includes capillary fringe) | | | |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: wetland hydrology is not present.

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Prunus serotina</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Acer rubrum</u> | | <u>20</u> | <u>Y</u> | <u>FAC</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | <u>40</u> | | |
| | | | = Total Cover | | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|--------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Quercus rubrum</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Rosa multiflora</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 3. | <u>Carya cordiformis</u> | | <u>10</u> | <u>Y</u> | <u>FACU</u> |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | <u>45</u> | | |
| | | | = Total Cover | | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|---------------------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>Alliaria petiolata</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | <u>15</u> | | |
| | | | = Total Cover | | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|------------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Parthenocissus quinquefolia</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | <u>15</u> | | |
| | | | = Total Cover | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|----------------------|---------------------|
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ | (A) _____ (B) _____ |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- _____ 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0[†]
- _____ 4 - Morphological Adaptations[†] (Provide supporting data in Remarks or on a separate sheet)
- _____ Problematic Hydrophytic Vegetation[†] (Explain)

[†] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes _____ No ✓

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

Upland veg is dominant.

SOIL

Sampling Point: W018-PSS-CATZ-UPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

| | | |
|---------------|-----|--|
| Hydric | | |
| Soil Present? | Yes | No <input checked="" type="checkbox"/> |

Soil Description Remarks:

Hydric Soils are not present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/13/2017
 Applicant/Owner: ARP State: OH Sampling Point: W019-PEM-CAT2
 Investigator(s): RLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.708921 Long: -81.418127 Datum: NAD 83
 Soil Map Unit Name: Glo-Gilpin Silty loam, 8 to 15.1 Slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no Soil no or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no Soil no or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|-----------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | | |

Remarks: Wetland data point for W019-PEM-CAT2.
 Data point taken in old strip mine pit.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

| | |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

| |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|------------------------|---|-----------------------------|---------------------------|
| Surface Water Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>2"</u> |
| Water Table Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>6"</u> |
| Saturation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Depth (inches): <u>0</u> |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology Indicators are A1, A3, C3, D2 and D5.

VEGETATION - Use scientific names of plants.

Sampling Point: W019-PEM-CAT2

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|------------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Populus grandidentata</u> | | <u>10</u> | <u>Y</u> | <u>FACW</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>10</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>None</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|----------------------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>Scirpus polyphyllus</u> | | <u>55</u> | <u>Y</u> | <u>Obl</u> |
| 2. | <u>Impatiens capensis</u> | | <u>15</u> | <u>Y</u> | <u>FACW</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>70</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>None</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|--------------------------|--------------|
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ (A) | _____ (B) |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant. -passed the dominance test.

Sampling Point: W019-PEM-CAT2

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147,148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Hydric

Type: _____

Depth (inches): _____

Soil Present?

Yes

No

Meets F2, F3

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/13/2017
 Applicant/Owner: ATP State: OH Sampling Point: W019-PEM-CAT2-UPL
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): CONVEX Slope (%) 15%
 Subregion (LRR or MLRA): LRR Lat: 40.708859 Long: -81.418208 Datum: NAD83
 Soil Map Unit Name: GdC-Gilpin Silty loam, 8 to 15% slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation NO, Soil NO, or Hydrology NO significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation NO, Soil NO, or Hydrology NO naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒
 Hydric Soil Present? Yes ☐ No ☒
 Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland?

Yes ☐ No ☒

Remarks: Upland data for W019-PEM-CAT2.
Data point taken within forested area. Entire site has been previously
strip mined.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Aquatic Fauna (B13)

☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Moss Trim Lines (B16)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ Microtopographic Relief (D4)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):
 Water Table Present? Yes ☐ No ☒ Depth (inches):
 Saturation Present? Yes ☐ No ☒ Depth (inches):
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology indicators are not present.

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-----------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Quercus rubrum</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Acer rubrum</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| | | | <u>30</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|---------------------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>Rosa multiflora</u> | | <u>30</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Quercus rubrum</u> | | <u>10</u> | <u>N</u> | <u>FACU</u> |
| 3. | <u>Sassafras albidum</u> | | <u>5</u> | <u>Y</u> | <u>FACU</u> |
| 4. | <u>Fraxinus americana</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| | | | <u>70</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|---------------------------|-------------------------|------------------|-------------------|------------------|
| 1. | <u>Alliaria petiolata</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | <u>15</u> | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|-------------|--------------------------|------------------|-------------------|------------------|
| 1. | <u>None</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| | | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

_____ 1 - Rapid Test for Hydrophytic Vegetation

_____ 2 - Dominance Test is >50%

_____ 3 - Prevalence Index is ≤3.0¹

_____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Upland veg is dominant.

SOIL

Sampling Point: W019-PEM-CAT2-UPL

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) (**LRR N**)
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147,148**)
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric
Soil Present? Yes No ☒

Soil Description Remarks:

Hydric Soils not present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/13/2017
 Applicant/Owner: ACP State: OH Sampling Point: W020-PSS-CATMOD2
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Dip Local relief (concave, convex, none): concave Slope (%) 0.1
 Subregion (LRR or MLRA): LRR Lat: 40.707902 Long: -81.419581 Datum: NAD 83
 Soil Map Unit Name: Gdc-Gilpin Silt loam, 8 to 15% Slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | |
|---------------------------------|---|-----------------------------|---------------------------------------|---|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |

Remarks: Wetland data for W020-PSS-CATMOD2
Data point taken in forested area. Entire site have been previously
Strip mined - Unreclaimed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

☐ Surface Water (A1)
☒ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Aquatic Fauna (B13)

☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Moss Trim Lines (B16)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ Microtopographic Relief (D4)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0
 Water Table Present? Yes ☒ No ☐ Depth (inches): 10"
 Saturation Present? Yes ☒ No ☐ Depth (inches): 0
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology Indicators are A3, C3, D2 and D5.

VEGETATION - Use scientific names of plants.

Sampling Point: W020-PSS-CATM02

| Tree Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|----------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>None</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| | | = Total Cover | | |

| Sapling/Shrub Stratum | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|---------------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>Fraxinus alnus</u> | | <u>30</u> | <u>Y</u> | <u>Fac</u> |
| 2. <u>Ulmus americana</u> | | <u>10</u> | <u>N</u> | <u>FACW</u> |
| 3. <u>Acer rubrum</u> | | <u>15</u> | <u>Y</u> | <u>FAC</u> |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | | <u>55</u> | = Total Cover | |

| Herb Stratum | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------------|-------------------------|------------------|-------------------|------------------|
| 1. <u>Leersia oryzoides</u> | | <u>20</u> | <u>Y</u> | <u>Obl</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| | | <u>20</u> | = Total Cover | |

| Woody Vine Stratum | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|--------------------------|------------------|-------------------|------------------|
| 1. <u>None</u> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| | | <u>0</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------|--------------|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: | (A) (B) |

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☒ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

Wetland veg is dominant - passes the dominance test.

SOIL

Sampling Point: W020-PSS-CATMOD2

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) **(LRR N)**
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147,148)**
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
(MLRA 136, 147)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If observed):

Type: _____

Depth (inches): _____

| | | | |
|---------------|-----|---|----|
| Hydric | | | |
| Soil Present? | Yes | ✓ | No |

Soil Description Remarks:

Meets F3.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: South Canton City/County: Stark Co. Sampling Date: 9/13/2017
 Applicant/Owner: ACP State: OH Sampling Point: W020-PSS-AT/M012-UP
 Investigator(s): KLV Section, Township, Range: Pike Twp.
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): CONVEX Slope (%) 20.1
 Subregion (LRR or MLRA): LRR Lat: 40.707943 Long: -81.419453 Datum: NAD83
 Soil Map Unit Name: Gdc-Gilpin Silty loam, 8 to 15% Slopes NWI classification: N/A
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)
 Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|--|------------------------------|--|---------------------------------------|------------------------------|--|
| Hydrophytic Vegetation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Wetland Hydrology Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | | |
| Remarks: <u>Upland data for</u> <u>Data point taken in forested area - Entire site has been previously strip mined.</u> | | | | | |

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required, check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Iron Deposits (B5) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |
| <input type="checkbox"/> Aquatic Fauna (B13) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

| | | | |
|------------------------|------------------------------|--|--------------------------------------|
| Surface Water Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Water Table Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |
| Saturation Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Depth (inches): <input type="text"/> |

(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology is not present.

| Tree Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|--------------------------|--------------------------|---------------------|----------------------|---------------------|
| 1. | <u>Quercus rubrum</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 2. | <u>Fagus grandifolia</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | <u>35</u> | = Total Cover | |

| Sapling/Shrub Stratum | | (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|-----------------------|------------------------|--------------------------|---------------------|----------------------|---------------------|
| 1. | <u>Rosa multiflora</u> | | <u>20</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | <u>20</u> | = Total Cover | |

| Herb Stratum | | (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------|-------------|-------------------------|---------------------|----------------------|---------------------|
| 1. | <u>none</u> | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| | | | | = Total Cover | |

| Woody Vine Stratum | | (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status |
|--------------------|------------------------------------|--------------------------|---------------------|----------------------|---------------------|
| 1. | <u>Parthenocissus quinquefolia</u> | | <u>15</u> | <u>Y</u> | <u>FACU</u> |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | <u>15</u> | = Total Cover | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|--------------------------|--------------|
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ (A) | _____ (B) |

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- _____ 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0¹
- _____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes _____ No ✓

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

Upland veg is dominant.

SOIL

Sampling Point: W020-PSS-(ATM02-

Soil Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- _____ Histosol (A1)
- _____ Histic Epipedon (A2)
- _____ Black Histic (A3)
- _____ Hydrogen Sulfide (A4)
- _____ Stratified Layers (A5)
- _____ 2 cm Muck (A10) **(LRR N)**
- _____ Depleted Below Dark Surface (A11)
- _____ Thick Dark Surface (A12)
- _____ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147,148)**
- _____ Sandy Gleyed Matrix (S4)
- _____ Sandy Redox (S5)
- _____ Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (**MLRA 147, 148**)
- Thin Dark Surface (S9) (**MLRA 147, 148**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
- Umbric Surface (F13) (**MLRA 136, 122**)
- Piedmont Floodplain Soils (F19) (**MLRA 148**)
- Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) **(MLRA 147)**
☐ Coast Prairie Redox (A16) **(MLRA 147, 148)**
☐ Piedmont Floodplain Soils (F19)
☐ **(MLRA 136, 147)**
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric
Soil Present? Yes No ☒

Soil Description Remarks:

Hydric Soils are not present

APPENDIX C

Primary Headwater Habitat Evaluation (HHEI) Data Forms



Primary Headwater Habitat Evaluation Form

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

26

SITE NAME/LOCATION AFP-South Canton

5001

SITE NUMBER

RIVER BASIN

Tuscarawas R.

DRAINAGE AREA (mi²)

0.0006 sq mi.

LENGTH OF STREAM REACH (ft) 200

LAT. 40.71411

LONG. -81.41549

RIVER CODE

RIVER MILE

DATE 9/7/2017

SCORER KLV

COMMENTS

5001

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL

☐ NONE / NATURAL CHANNEL

☒ RECOVERED

☐ RECOVERING

☐ RECENT OR NO RECOVERY

MODIFICATIONS:

surface mining

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE

☐

BLDR SLABS [16 pts]

☐

BOULDER (>256 mm) [16 pts]

☐

BEDROCK [16 pt]

☐

COBBLE (65-256 mm) [12 pts]

☒

GRAVEL (2-64 mm) [9 pts]

☐

SAND (<2 mm) [6 pts]

PERCENT

15

20

TYPE

☒

SILT [3 pt]

☐

LEAF PACK/WOODY DEBRIS [3 pts]

☐

FINE DETRITUS [3 pts]

☐

CLAY or HARDPAN [0 pt]

☐

MUCK [0 pts]

☐

ARTIFICIAL [3 pts]

PERCENT

30

15

Total of Percentages of
Bldr Slabs, Boulder, Cobble, Bedrock

15

(A) 12

(B) 4

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI Metric Points

Substrate
Max = 40

16

A + B

Pool Depth
Max = 30

0

Bankfull
Width
Max=30

10

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

☐

> 30 centimeters [20 pts]

☐

> 22.5 - 30 cm [30 pts]

☐

> 10 - 22.5 cm [25 pts]

☐

> 5 cm - 10 cm [15 pts]

☐

< 5 cm [5 pts]

☒

NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check ONLY one box):

☐

> 4.0 meters (> 13') [30 pts]

☐

> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]

☐

> 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]

☒

> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]

☐

≤ 1.0 m (≤ 3' 3") [5 pts]

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

L R

☒ ☒

(Per Bank)

Wide >10m

☐

Moderate 5-10m

☐

Narrow <5m

☐

None

☐

COMMENTS

FLOODPLAIN QUALITY

L R

☐ ☐

(Most Predominant per Bank)

Mature Forest, Wetland

☒ ☒

Immature Forest, Shrub or Old

☐

Field

☐

Residential, Park, New Field

☐

Fenced Pasture

L R

☐ ☐

Conservation Tillage

☐

Urban or Industrial

☐

Open Pasture, Row

☐

Crop

☐

Mining or Construction

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

☐

Stream Flowing

☐

Subsurface flow with isolated pools (Interstitial)

☒

Moist Channel, isolated pools, no flow (Intermittent)

☒

Dry channel, no water (Ephemeral)

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

☐

None

☐

0.5

☐

1.0

☐

1.5

☒

2.0

☐

2.5

☐

3.0

☐

>3

STREAM GRADIENT ESTIMATE

☐

Flat (0.5 ft/100 ft)

☐

Flat to Moderate

☒

Moderate (2 ft/100 ft)

☐

Moderate to Severe

☐

Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This information must also be completed):

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.76 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar & Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: 4.25"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 15%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

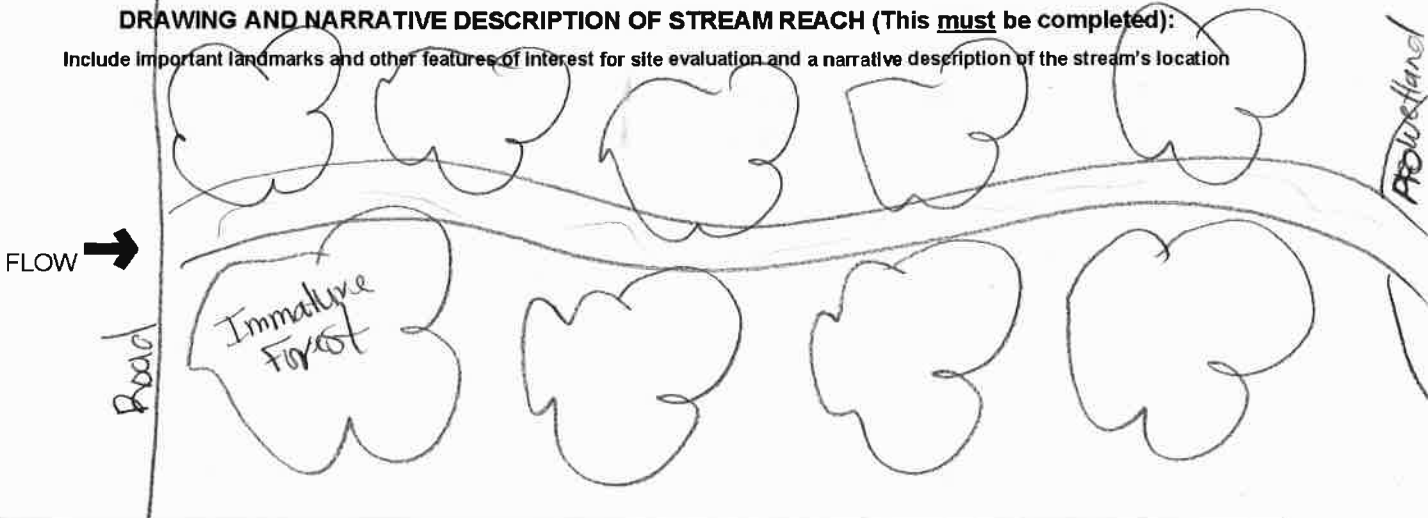
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

29

SITE NAME/LOCATION APP South Canyon
S002 SITE NUMBER Tuscarawas R. RIVER BASIN 0.03 sq. mi. DRAINAGE AREA (mi²)
LENGTH OF STREAM REACH (ft) 85 LAT. 40.71445 LONG. -81.41926 RIVER CODE S002 RIVER MILE
DATE 9/7/2017 SCORER KLV COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL ☐ NONE / NATURAL CHANNEL ☒ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERYMODIFICATIONS: surface mining

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

| TYPE | PERCENT | TYPE | PERCENT |
|--|-----------|--|-----------|
| <input type="checkbox"/> BLDG SLABS [16 pts] | | <input checked="" type="checkbox"/> SILT [3 pt] | <u>65</u> |
| <input type="checkbox"/> BOULDER (>256 mm) [16 pts] | | <input checked="" type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts] | <u>20</u> |
| <input type="checkbox"/> BEDROCK [16 pt] | | <input type="checkbox"/> FINE DETRITUS [3 pts] | |
| <input type="checkbox"/> COBBLE (65-256 mm) [12 pts] | | <input type="checkbox"/> CLAY or HARDPAN [0 pt] | |
| <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts] | <u>15</u> | <input type="checkbox"/> MUCK [0 pts] | |
| <input type="checkbox"/> SAND (<2 mm) [6 pts] | | <input type="checkbox"/> ARTIFICIAL [3 pts] | |

Total of Percentages of
Blr Slabs, Boulder, Cobble, Bedrock0

(A)

6

(B)

3

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
PointsSubstrate
Max = 409

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 30 centimeters [20 pts] | <input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts] |
| <input type="checkbox"/> > 22.5 - 30 cm [30 pts] | <input type="checkbox"/> < 5 cm [5 pts] |
| <input type="checkbox"/> > 10 - 22.5 cm [25 pts] | <input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts] |

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

10Pool Depth
Max = 3015

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

| | |
|---|---|
| <input type="checkbox"/> > 4.0 meters (> 13') [30 pts] | <input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] |
| <input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] | <input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts] |
| <input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] | |

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

3'Bankfull
Width
Max=305

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

| RIPARIAN WIDTH | | FLOODPLAIN QUALITY | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| L | R | L | R | L | R |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Wide >10m | | Mature Forest, Wetland | | Conservation Tillage | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Moderate 5-10m | | Immature Forest, Shrub or Old Field | | Urban or Industrial | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Narrow <5m | | Residential, Park, New Field | | Open Pasture, Row Crop | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| None | | Fenced Pasture | | Mining or Construction | |

COMMENTS

- FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

| | |
|---|--|
| <input checked="" type="checkbox"/> Stream Flowing | <input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent) |
| <input type="checkbox"/> Subsurface flow with isolated pools (Interstitial) | <input type="checkbox"/> Dry channel, no water (Ephemeral) |

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

| | | | |
|-------------------------------|------------------------------|---|------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> 1.0 | <input checked="" type="checkbox"/> 2.0 | <input type="checkbox"/> 3.0 |
| <input type="checkbox"/> 0.5 | <input type="checkbox"/> 1.5 | <input type="checkbox"/> 2.5 | <input type="checkbox"/> >3 |

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☒ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.86 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar & Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: 4.25"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 25%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

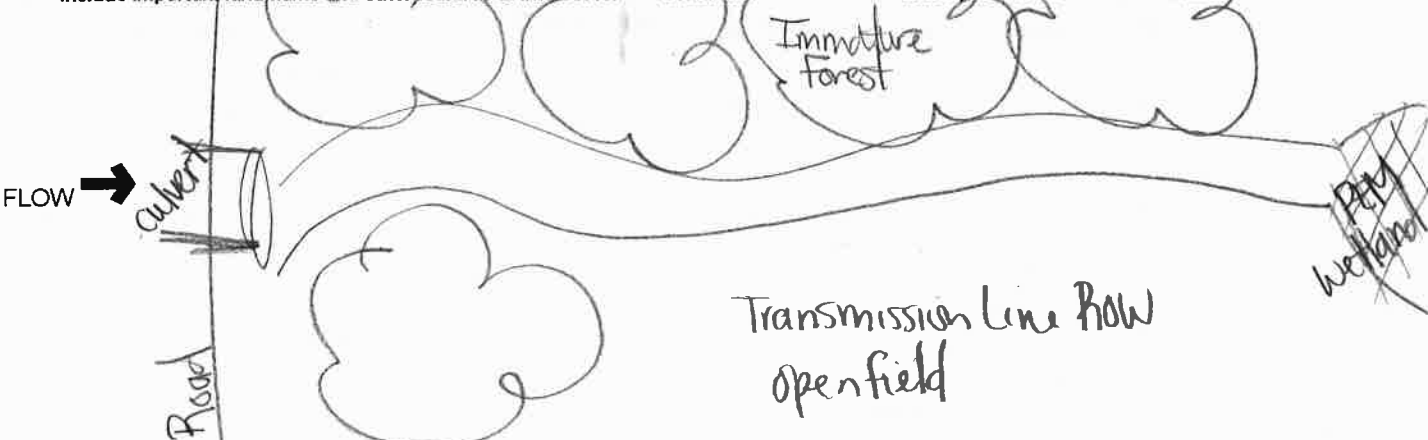
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

39

SITE NAME/LOCATION APP South Canyon
S003 SITE NUMBER RIVER BASIN Tuscarawas R. DRAINAGE AREA (mi²) 0.04 sq mi
LENGTH OF STREAM REACH (ft) 200 LAT. 40.71377 LONG. -81.42033 RIVER CODE RIVER MILE
DATE 9/7/2017 SCORER KLV COMMENTS S003

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☒ RECOVERING ☐ RECENT OR NO RECOVERY

MODIFICATIONS: Acid mine drainage - surface mining

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

| TYPE | PERCENT | TYPE | PERCENT |
|--|-----------|---|-----------|
| <input type="checkbox"/> BLDR SLABS [16 pts] | | <input checked="" type="checkbox"/> SILT [3 pt] | <u>25</u> |
| <input type="checkbox"/> BOULDER (>256 mm) [16 pts] | | <input checked="" type="checkbox"/> LEAF PACKWOODY DEBRIS [3 pts] | <u>25</u> |
| <input type="checkbox"/> BEDROCK [16 pt] | | <input type="checkbox"/> FINE DETRITUS [3 pts] | |
| <input type="checkbox"/> COBBLE (65-256 mm) [12 pts] | | <input type="checkbox"/> CLAY or HARDPAN [0 pt] | |
| <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts] | <u>10</u> | <input type="checkbox"/> MUCK [0 pts] | |
| <input type="checkbox"/> SAND (<2 mm) [6 pts] | | <input type="checkbox"/> ARTIFICIAL [3 pts] | |

Total of Percentages of
Bldr Slabs, Boulder, Cobble, Bedrock 0

(A)

6

(B)

3

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

9

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 30 centimeters [20 pts] | <input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts] |
| <input type="checkbox"/> > 22.5 - 30 cm [30 pts] | <input type="checkbox"/> < 5 cm [5 pts] |
| <input type="checkbox"/> > 10 - 22.5 cm [25 pts] | <input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts] |

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

10

Pool Depth
Max = 30

15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

| | |
|---|--|
| <input type="checkbox"/> > 4.0 meters (> 13') [30 pts] | <input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] |
| <input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] | <input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts] |
| <input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] | |

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

4

Bankfull
Width
Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

| | | |
|-------------------------------------|-------------------------------------|----------------|
| L | R | (Per Bank) |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Wide >10m |
| <input type="checkbox"/> | <input type="checkbox"/> | Moderate 5-10m |
| <input type="checkbox"/> | <input type="checkbox"/> | Narrow <5m |
| <input type="checkbox"/> | <input type="checkbox"/> | None |

COMMENTS

FLOODPLAIN QUALITY

| | | |
|-------------------------------------|-------------------------------------|-------------------------------------|
| L | R | (Most Predominant per Bank) |
| <input type="checkbox"/> | <input type="checkbox"/> | Mature Forest, Wetland |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Immature Forest, Shrub or Old Field |
| <input type="checkbox"/> | <input type="checkbox"/> | Residential, Park, New Field |
| <input type="checkbox"/> | <input type="checkbox"/> | Fenced Pasture |

| | | |
|--------------------------|--------------------------|------------------------|
| L | R | |
| <input type="checkbox"/> | <input type="checkbox"/> | Conservation Tillage |
| <input type="checkbox"/> | <input type="checkbox"/> | Urban or Industrial |
| <input type="checkbox"/> | <input type="checkbox"/> | Open Pasture, Row Crop |
| <input type="checkbox"/> | <input type="checkbox"/> | Mining or Construction |

- FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

| | |
|---|--|
| <input checked="" type="checkbox"/> Stream Flowing | <input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent) |
| <input type="checkbox"/> Subsurface flow with isolated pools (Interstitial) | <input type="checkbox"/> Dry channel, no water (Ephemeral) |

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

| | | | |
|-------------------------------|------------------------------|---|------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> 1.0 | <input checked="" type="checkbox"/> 2.0 | <input type="checkbox"/> 3.0 |
| <input type="checkbox"/> 0.5 | <input type="checkbox"/> 1.5 | <input type="checkbox"/> 2.5 | <input type="checkbox"/> >3 |

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☒ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.90 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar or Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: 4.25"
Photograph Information: _____
Elevated Turbidity? (Y/N): N Canopy (% open): 201
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____
Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____
Is the sampling reach representative of the stream (Y/N): Y If not, please explain: _____

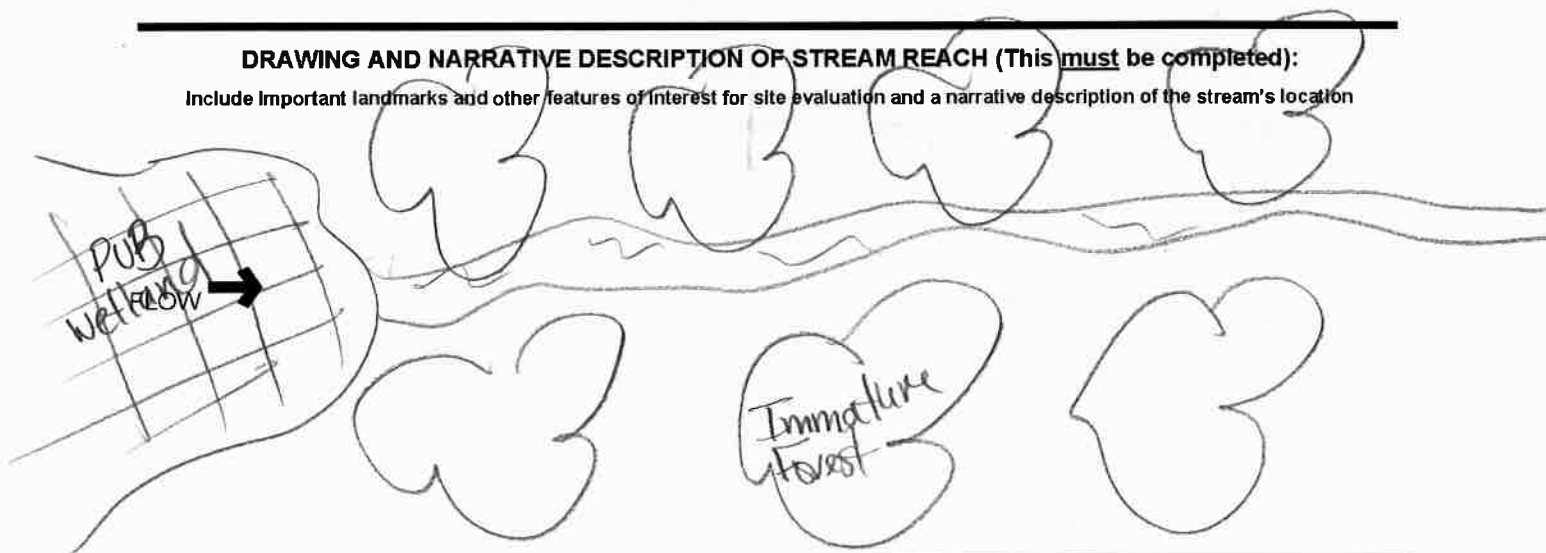
Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N): N Voucher? (Y/N): N Salamanders Observed? (Y/N): N Voucher? (Y/N): N
Frogs or Tadpoles Observed? (Y/N): N Voucher? (Y/N): N Aquatic Macroinvertebrates Observed? (Y/N): N Voucher? (Y/N): N
Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

61

SITE NAME/LOCATION ASP-SOUTH CANYON
S004 SITE NUMBER RIVER BASIN Tuscarawas R. DRAINAGE AREA (mi²) 0.355 mi.
LENGTH OF STREAM REACH (ft) 200 LAT. 40.71419 LONG. -81.42024 RIVER CODE RIVER MILE
DATE 9/8/2017 SCORER KLV COMMENTS S004

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL ☐ NONE / NATURAL CHANNEL ☒ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

MODIFICATIONS: surface mining

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

| TYPE | PERCENT | TYPE | PERCENT |
|--|-----------|---|-----------|
| <input type="checkbox"/> BLDG SLABS [16 pts] | | <input checked="" type="checkbox"/> SILT [3 pt] | <u>20</u> |
| <input type="checkbox"/> BOULDER (>256 mm) [16 pts] | | <input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts] | <u>15</u> |
| <input type="checkbox"/> BEDROCK [16 pt] | | <input type="checkbox"/> FINE DETRITUS [3 pts] | |
| <input type="checkbox"/> COBBLE (65-256 mm) [12 pts] | <u>15</u> | <input type="checkbox"/> CLAY or HARDPAN [0 pt] | |
| <input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts] | <u>20</u> | <input type="checkbox"/> MUCK [0 pts] | |
| <input type="checkbox"/> SAND (<2 mm) [6 pts] | | <input type="checkbox"/> ARTIFICIAL [3 pts] | |

Total of Percentages of
Blr Slabs, Boulder, Cobble, Bedrock

15

(A)

12

(B)

4

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

16

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

| | |
|---|--|
| <input type="checkbox"/> > 30 centimeters [20 pts] | <input type="checkbox"/> > 5 cm - 10 cm [15 pts] |
| <input type="checkbox"/> > 22.5 - 30 cm [30 pts] | <input type="checkbox"/> < 5 cm [5 pts] |
| <input checked="" type="checkbox"/> > 10 - 22.5 cm [25 pts] | <input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts] |

Pool Depth
Max = 30

25

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

20cm

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 4.0 meters (> 13') [30 pts] | <input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] |
| <input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] | <input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts] |
| <input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] | |

Bankfull
Width
Max=30

20

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

6'

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

| L | R | (Per Bank) |
|--------------------------|--------------------------|----------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Wide >10m |
| <input type="checkbox"/> | <input type="checkbox"/> | Moderate 5-10m |
| <input type="checkbox"/> | <input type="checkbox"/> | Narrow <5m |
| <input type="checkbox"/> | <input type="checkbox"/> | None |

FLOODPLAIN QUALITY

| L | R | (Most Predominant per Bank) |
|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Mature Forest, Wetland |
| <input type="checkbox"/> | <input type="checkbox"/> | Immature Forest, Shrub or Old Field |
| <input type="checkbox"/> | <input type="checkbox"/> | Residential, Park, New Field |
| <input type="checkbox"/> | <input type="checkbox"/> | Fenced Pasture |

| L | R | |
|--------------------------|--------------------------|------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Conservation Tillage |
| <input type="checkbox"/> | <input type="checkbox"/> | Urban or Industrial |
| <input type="checkbox"/> | <input type="checkbox"/> | Open Pasture, Row Crop |
| <input type="checkbox"/> | <input type="checkbox"/> | Mining or Construction |

COMMENTS

- FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

| | |
|---|--|
| <input checked="" type="checkbox"/> Stream Flowing | <input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent) |
| <input type="checkbox"/> Subsurface flow with isolated pools (Interstitial) | <input type="checkbox"/> Dry channel, no water (Ephemeral) |

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

| | | | |
|-------------------------------|------------------------------|---|------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> 1.0 | <input checked="" type="checkbox"/> 2.0 | <input type="checkbox"/> 3.0 |
| <input type="checkbox"/> 0.5 | <input type="checkbox"/> 1.5 | <input checked="" type="checkbox"/> 2.5 | <input type="checkbox"/> >3 |

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☒ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.52 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar r Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: 4.25"
Photograph Information: _____
Elevated Turbidity? (Y/N): N Canopy (% open): 25%
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____
Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____
Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

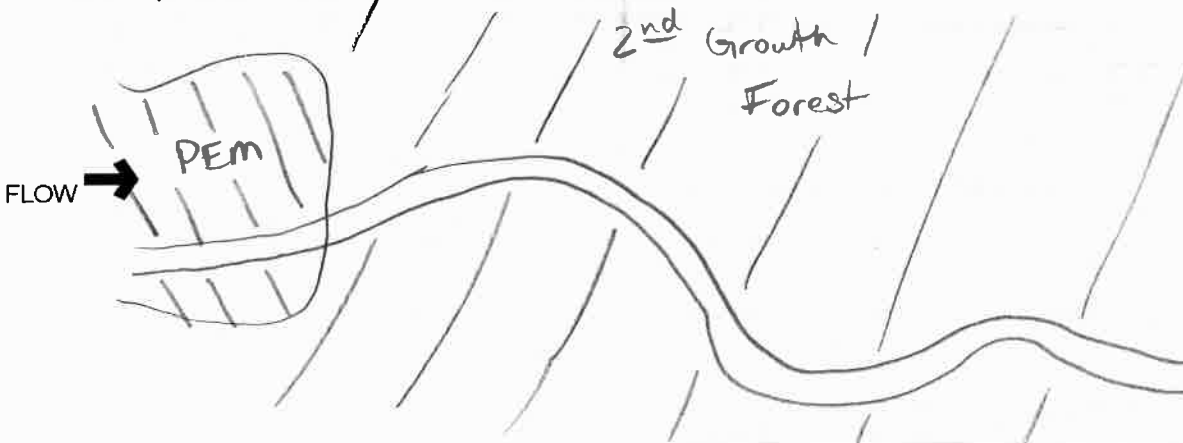
Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

54

SITE NAME/LOCATION APP SOUTH CANYON

S005

SITE NUMBER

RIVER BASIN Tuscarawas

DRAINAGE AREA (mi²) 0.15 sq. mi.

LENGTH OF STREAM REACH (ft) 200

LAT. 40.71273

LONG. -81.41618

RIVER CODE

RIVER MILE

DATE 9/11/2017

SCORER KLV

COMMENTS

S005

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL

☐ NONE / NATURAL CHANNEL

☒ RECOVERED

☐ RECOVERING

☐ RECENT OR NO RECOVERY

MODIFICATIONS:

Surface Mining - Erosion

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

| TYPE | PERCENT | TYPE | PERCENT |
|--|-----------|---|-----------|
| <input type="checkbox"/> BLDR SLABS [16 pts] | | <input type="checkbox"/> SILT [3 pt] | <u>15</u> |
| <input type="checkbox"/> BOULDER (>256 mm) [16 pts] | | <input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts] | <u>10</u> |
| <input type="checkbox"/> BEDROCK [16 pt] | | <input type="checkbox"/> FINE DETRITUS [3 pts] | |
| <input type="checkbox"/> COBBLE (65-256 mm) [12 pts] | <u>15</u> | <input type="checkbox"/> CLAY or HARDPAN [0 pt] | |
| <input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts] | <u>20</u> | <input type="checkbox"/> MUCK [0 pts] | |
| <input checked="" type="checkbox"/> SAND (<2 mm) [6 pts] | <u>40</u> | <input type="checkbox"/> ARTIFICIAL [3 pts] | |

Total of Percentages of
Bldr Slabs, Boulder, Cobble, Bedrock

15

(A) 15

(B) 4

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

19

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 30 centimeters [20 pts] | <input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts] |
| <input type="checkbox"/> > 22.5 - 30 cm [30 pts] | <input type="checkbox"/> < 5 cm [5 pts] |
| <input type="checkbox"/> > 10 - 22.5 cm [25 pts] | <input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts] |

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

10

Pool Depth
Max = 30

15

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check ONLY one box):

| | |
|---|---|
| <input checked="" type="checkbox"/> > 4.0 meters (> 13') [30 pts] | <input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] |
| <input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] | <input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts] |
| <input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] | |

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

5

Bankfull
Width
Max=30

20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

FLOODPLAIN QUALITY

| L | R | (Per Bank) | L | R | (Most Predominant per Bank) | L | R | |
|-------------------------------------|-------------------------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Wide >10m | <input type="checkbox"/> | <input type="checkbox"/> | Mature Forest, Wetland | <input type="checkbox"/> | <input type="checkbox"/> | Conservation Tillage |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Moderate 5-10m | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Immature Forest, Shrub or Old Field | <input type="checkbox"/> | <input type="checkbox"/> | Urban or Industrial |
| <input type="checkbox"/> | <input type="checkbox"/> | Narrow <5m | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Residential, Park, New Field | <input type="checkbox"/> | <input type="checkbox"/> | Open Pasture, Row Crop |
| <input type="checkbox"/> | <input type="checkbox"/> | None | <input type="checkbox"/> | <input type="checkbox"/> | Fenced Pasture | <input type="checkbox"/> | <input type="checkbox"/> | Mining or Construction |

COMMENTS

- ☒ **FLOW REGIME** (At Time of Evaluation) (Check ONLY one box):

| | |
|---|--|
| <input checked="" type="checkbox"/> Stream Flowing | <input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent) |
| <input type="checkbox"/> Subsurface flow with isolated pools (Interstitial) | <input type="checkbox"/> Dry channel, no water (Ephemeral) |

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

| | | | |
|-------------------------------|------------------------------|---|------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> 1.0 | <input checked="" type="checkbox"/> 2.0 | <input type="checkbox"/> 3.0 |
| <input type="checkbox"/> 0.5 | <input type="checkbox"/> 1.5 | <input checked="" type="checkbox"/> 2.5 | <input type="checkbox"/> >3 |

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft)

☐ Flat to Moderate

☒ Moderate (2 ft/100 ft)

☐ Moderate to Severe

☐ Severe (10 ft/100 ft)

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.74 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar & Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: 4.25"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 70%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

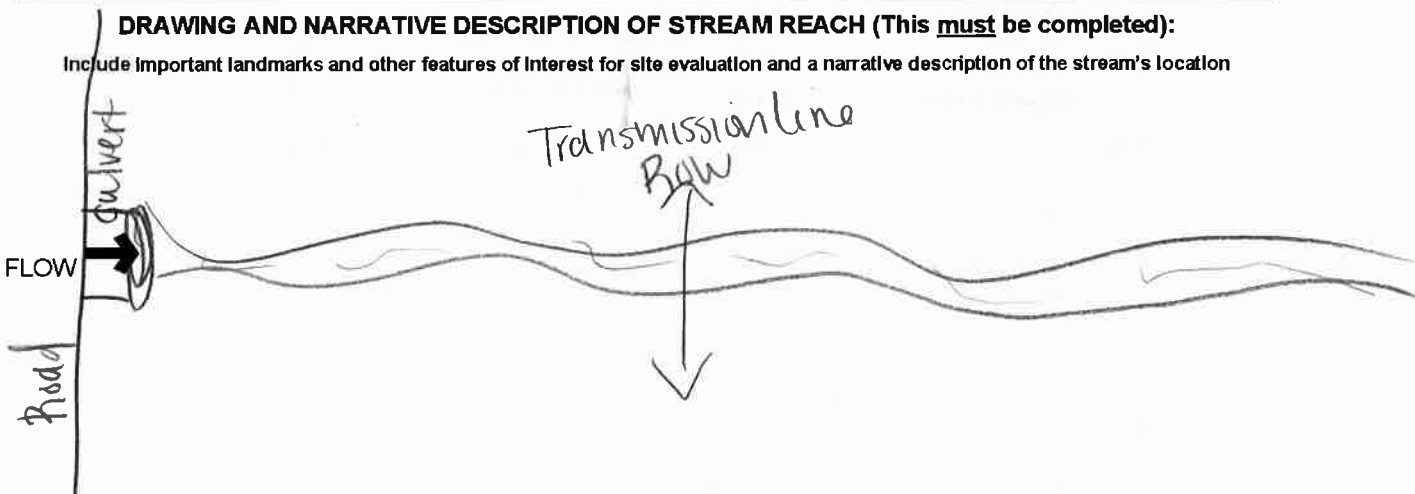
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

50

SITE NAME/LOCATION ACP SOUTH CANYON

Soole

SITE NUMBER

RIVER BASIN Tuscarawas R.

DRAINAGE AREA (mi²) 0.15 sq mi.

LENGTH OF STREAM REACH (ft) 200

LAT. 40.71185

LONG. -81.41517

RIVER CODE

RIVER MILE

DATE 9/11/2017

SCORER HLV

COMMENTS

Soole

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL



NONE / NATURAL CHANNEL



RECOVERED



RECOVERING



RECENT OR NO RECOVERY

MODIFICATIONS:

surface mining

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE



BLDR SLABS [16 pts]



BOULDER (>256 mm) [16 pts]



BEDROCK [16 pt]



COBBLE (65-256 mm) [12 pts]



GRAVEL (2-64 mm) [9 pts]



SAND (<2 mm) [6 pts]

PERCENT

10

20

40

TYPE



SILT [3 pt]



LEAF PACK/WOODY DEBRIS [3 pts]



FINE DETRITUS [3 pts]



CLAY or HARDPAN [0 pt]



MUCK [0 pts]



ARTIFICIAL [3 pts]

PERCENT

15

15

Total of Percentages of
Bldr Slabs, Boulder, Cobble, Bedrock

10

(A)

15

(B)

5

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

20

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):



> 30 centimeters [20 pts]



> 22.5 - 30 cm [30 pts]



> 10 - 22.5 cm [25 pts]



> 5 cm - 10 cm [15 pts]



< 5 cm [5 pts]



NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

10

Pool Depth
Max = 30

15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):



> 4.0 meters (> 13') [30 pts]



> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]



> 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]



> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]



≤ 1.0 m (≤ 3' 3") [5 pts]

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

4'

Bankfull
Width
Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

FLOODPLAIN QUALITY

L R

(Per Bank)



Wide >10m



Moderate 5-10m



Narrow <5m



None

COMMENTS

L R

(Most Predominant per Bank)



Mature Forest, Wetland



Immature Forest, Shrub or Old Field



Residential, Park, New Field



Fenced Pasture

L R

Conservation Tillage



Urban or Industrial



Open Pasture, Row Crop



Mining or Construction

- FLOW REGIME (At Time of Evaluation) (Check ONLY one box):



Stream Flowing



Moist Channel, isolated pools, no flow (Intermittent)



Subsurface flow with isolated pools (Interstitial)



Dry channel, no water (Ephemeral)

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):



None



1.0



2.0



3.0



0.5



1.5



2.5



>3

STREAM GRADIENT ESTIMATE



Flat (0.5 ft/100 ft)



Flat to Moderate



Moderate (2 ft/100 ft)



Moderate to Severe



Severe (10 ft/100 ft)

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.76 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar & Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: 4.25"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 35%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N): Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

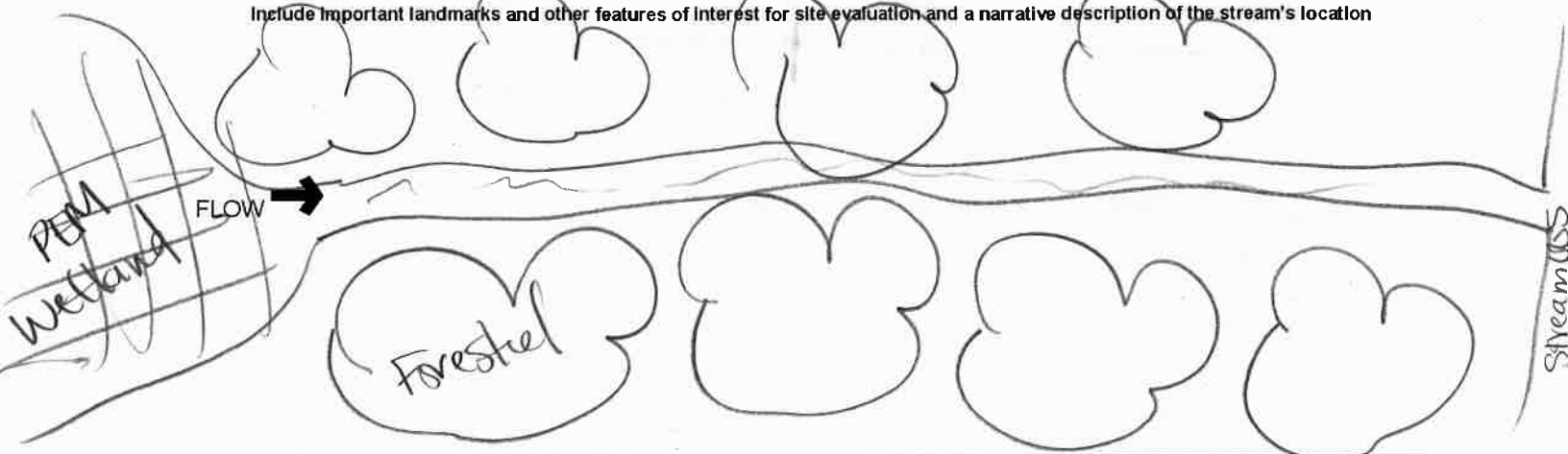
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

44

SITE NAME/LOCATION ASP - South Canyon
5007 SITE NUMBER RIVER BASIN Tuscarawas R. DRAINAGE AREA (mi²) 0.309
LENGTH OF STREAM REACH (ft) 85 LAT. 40.70915 LONG. -81.41508 RIVER CODE RIVER MILE
DATE 9/12/2017 SCORER KLV COMMENTS 5007

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL ☐ NONE / NATURAL CHANNEL ☒ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

MODIFICATIONS: Surface Mining

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

| TYPE | PERCENT | TYPE | PERCENT |
|--|-----------|--|-----------|
| <input type="checkbox"/> BLDR SLABS [16 pts] | | <input checked="" type="checkbox"/> SILT [3 pt] | <u>20</u> |
| <input type="checkbox"/> BOULDER (>256 mm) [16 pts] | | <input checked="" type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts] | <u>25</u> |
| <input type="checkbox"/> BEDROCK [16 pt] | | <input type="checkbox"/> FINE DETRITUS [3 pts] | |
| <input type="checkbox"/> COBBLE (65-256 mm) [12 pts] | | <input type="checkbox"/> CLAY or HARDPAN [0 pt] | |
| <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts] | <u>15</u> | <input type="checkbox"/> MUCK [0 pts] | |
| <input type="checkbox"/> SAND (<2 mm) [6 pts] | | <input type="checkbox"/> ARTIFICIAL [3 pts] | |

Total of Percentages of
Bldr Slabs, Boulder, Cobble, Bedrock 0

(A)

6

(B)

3

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

9

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 30 centimeters [20 pts] | <input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts] |
| <input type="checkbox"/> > 22.5 - 30 cm [30 pts] | <input type="checkbox"/> < 5 cm [5 pts] |
| <input type="checkbox"/> > 10 - 22.5 cm [25 pts] | <input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts] |

Pool Depth
Max = 30

15

COMMENTS MAXIMUM POOL DEPTH (centimeters):

10cm

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 4.0 meters (> 13') [30 pts] | <input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] |
| <input checked="" type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] | <input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts] |
| <input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] | |

Bankfull
Width
Max=30

20

COMMENTS AVERAGE BANKFULL WIDTH (meters)

5'

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

| RIPARIAN WIDTH | | FLOODPLAIN QUALITY | | | |
|---|-------------------------------------|---|--------------------------|---|--------------------------|
| L | R | L | R | L | R |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (Per Bank) | | (Most Predominant per Bank) | | | |
| Wide >10m | | Mature Forest, Wetland | | Conservation Tillage | |
| <input type="checkbox"/> Moderate 5-10m | | <input checked="" type="checkbox"/> Immature Forest, Shrub or Old Field | | <input type="checkbox"/> Urban or Industrial | |
| <input type="checkbox"/> Narrow <5m | | <input type="checkbox"/> Residential, Park, New Field | | <input type="checkbox"/> Open Pasture, Row Crop | |
| <input type="checkbox"/> None | | <input type="checkbox"/> Fenced Pasture | | <input type="checkbox"/> Mining or Construction | |

COMMENTS

- FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

| | |
|---|--|
| <input checked="" type="checkbox"/> Stream Flowing | <input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent) |
| <input type="checkbox"/> Subsurface flow with isolated pools (Interstitial) | <input type="checkbox"/> Dry channel, no water (Ephemeral) |

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

| | | | |
|-------------------------------|------------------------------|---|------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> 1.0 | <input checked="" type="checkbox"/> 2.0 | <input type="checkbox"/> 3.0 |
| <input type="checkbox"/> 0.5 | <input type="checkbox"/> 1.5 | <input checked="" type="checkbox"/> 2.5 | <input type="checkbox"/> >3 |

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☒ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.46 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar & Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: 4.25"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 15%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

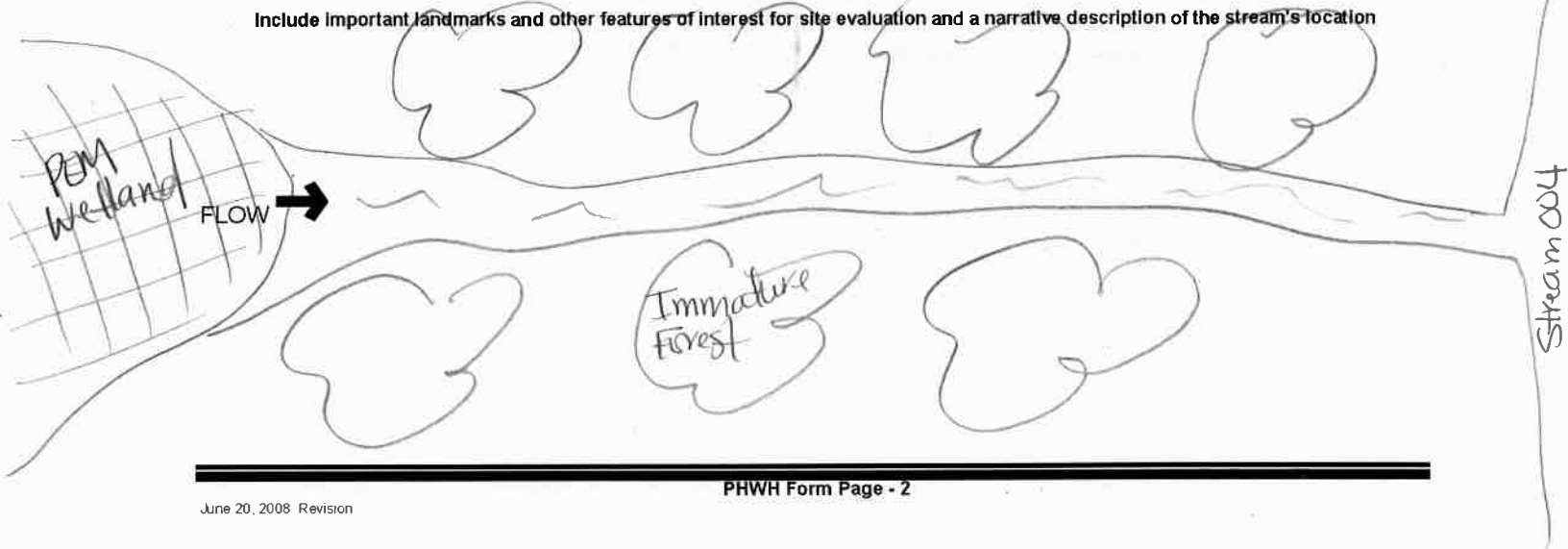
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

55

SITE NAME/LOCATION APP-SANNCANY
5008 SITE NUMBER RIVER BASIN Tuscarawas R. DRAINAGE AREA (mi²) 0.3099
LENGTH OF STREAM REACH (ft) 200 LAT. 40.70905 LONG. -81.41511 RIVER CODE _____ RIVER MILE _____
DATE 9/12/2017 SCORER KLV COMMENTS 5008

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL ☐ NONE / NATURAL CHANNEL ☒ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

MODIFICATIONS: Surface mining

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

| TYPE | PERCENT | TYPE | PERCENT |
|--|-----------|--|-----------|
| <input type="checkbox"/> BLDR SLABS [16 pts] | | <input checked="" type="checkbox"/> SILT [3 pt] | <u>45</u> |
| <input type="checkbox"/> BOULDER (>256 mm) [16 pts] | | <input checked="" type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts] | <u>25</u> |
| <input type="checkbox"/> BEDROCK [16 pt] | | <input type="checkbox"/> FINE DETRITUS [3 pts] | |
| <input type="checkbox"/> COBBLE (65-256 mm) [12 pts] | <u>20</u> | <input type="checkbox"/> CLAY or HARDPAN [0 pt] | |
| <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts] | <u>10</u> | <input type="checkbox"/> MUCK [0 pts] | |
| <input type="checkbox"/> SAND (<2 mm) [6 pts] | | <input type="checkbox"/> ARTIFICIAL [3 pts] | |

Total of Percentages of
Bldr Slabs, Boulder, Cobble, Bedrock 20

(A) 6

(B) 4

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

10

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

| | |
|---|--|
| <input type="checkbox"/> > 30 centimeters [20 pts] | <input type="checkbox"/> > 5 cm - 10 cm [15 pts] |
| <input checked="" type="checkbox"/> > 22.5 - 30 cm [30 pts] | <input type="checkbox"/> < 5 cm [5 pts] |
| <input type="checkbox"/> > 10 - 22.5 cm [25 pts] | <input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts] |

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters):

15

Pool Depth
Max = 30

25

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 4.0 meters (> 13') [30 pts] | <input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] |
| <input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] | <input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts] |
| <input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] | |

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters)

7'

Bankfull
Width
Max=30

20

This Information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

| L | R |
|-------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

COMMENTS _____

FLOODPLAIN QUALITY

| L | R |
|-------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

| L | R |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

- FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

| | |
|---|--|
| <input checked="" type="checkbox"/> Stream Flowing | <input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent) |
| <input type="checkbox"/> Subsurface flow with isolated pools (Interstitial) | <input type="checkbox"/> Dry channel, no water (Ephemeral) |

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

| | | | |
|-------------------------------|------------------------------|---|------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> 1.0 | <input checked="" type="checkbox"/> 2.0 | <input type="checkbox"/> 3.0 |
| <input type="checkbox"/> 0.5 | <input type="checkbox"/> 1.5 | <input checked="" type="checkbox"/> 2.5 | <input type="checkbox"/> >3 |

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☒ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.66 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar & Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: <.25"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 20%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N): Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

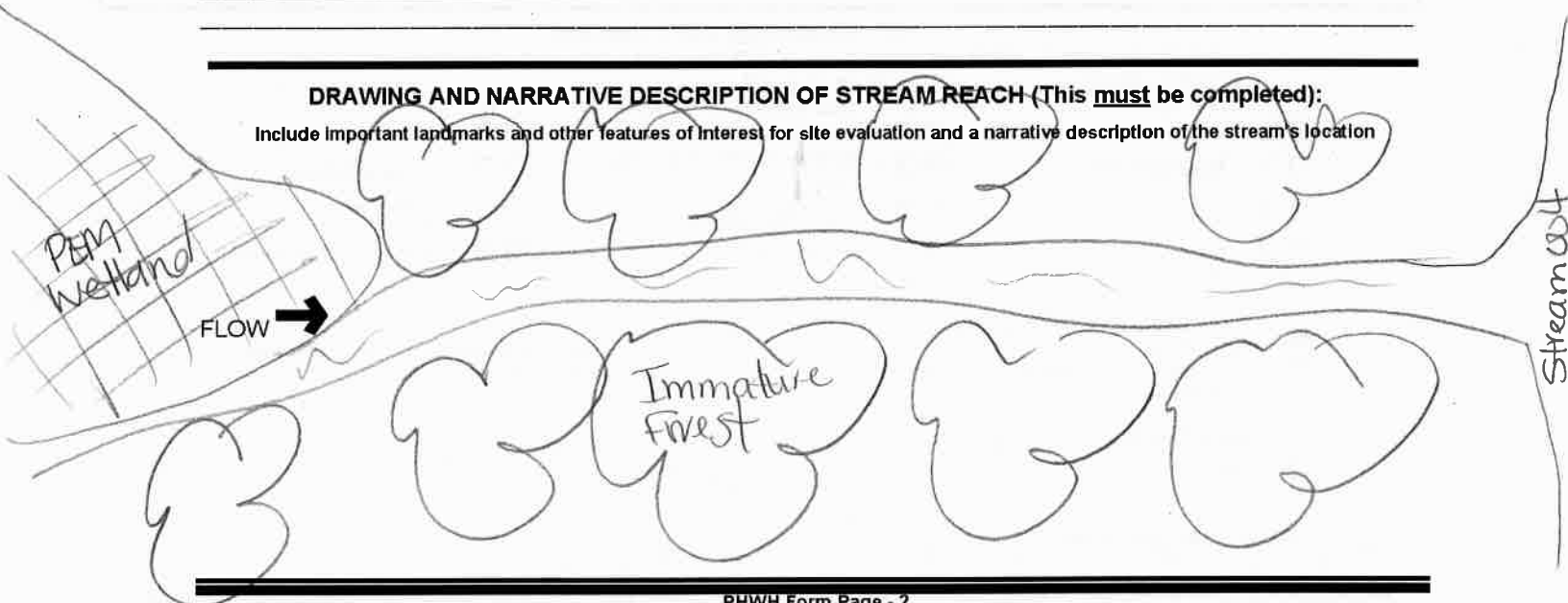
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N): N Voucher? (Y/N): N Salamanders Observed? (Y/N): N Voucher? (Y/N): N
Frogs or Tadpoles Observed? (Y/N): N Voucher? (Y/N): N Aquatic Macroinvertebrates Observed? (Y/N): N Voucher? (Y/N): N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

55

SITE NAME/LOCATION ATP - South Canyon
S009 SITE NUMBER Tuscarawas R. RIVER BASIN 0.04 DRAINAGE AREA (mi²)
LENGTH OF STREAM REACH (ft) 200 LAT. 40.70850 LONG. -81.41570 RIVER CODE S009 RIVER MILE
DATE 9/12/17 SCORER KLV COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL ☐ NONE / NATURAL CHANNEL ☒ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY
MODIFICATIONS: Surface mining

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

| TYPE | PERCENT | TYPE | PERCENT |
|--|-----------|--|-----------|
| <input type="checkbox"/> BLD R SLABS [16 pts] | | <input type="checkbox"/> SILT [3 pts] | <u>10</u> |
| <input type="checkbox"/> BOULDER (>256 mm) [16 pts] | | <input type="checkbox"/> LEAF PACKWOODY DEBRIS [3 pts] | <u>15</u> |
| <input type="checkbox"/> BEDROCK [16 pts] | | <input type="checkbox"/> FINE DETRITUS [3 pts] | |
| <input type="checkbox"/> COBBLE (65-256 mm) [12 pts] | <u>15</u> | <input type="checkbox"/> CLAY or HARDPAN [0 pts] | |
| <input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts] | <u>20</u> | <input type="checkbox"/> MUCK [0 pts] | |
| <input checked="" type="checkbox"/> SAND (<2 mm) [6 pts] | <u>40</u> | <input type="checkbox"/> ARTIFICIAL [3 pts] | |

Total of Percentages of
Blr Slabs, Boulder, Cobble, Bedrock

15

(A)

15

(B)

5

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

20

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 30 centimeters [20 pts] | <input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts] |
| <input type="checkbox"/> > 22.5 - 30 cm [30 pts] | <input type="checkbox"/> < 5 cm [5 pts] |
| <input type="checkbox"/> > 10 - 22.5 cm [25 pts] | <input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts] |

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

10

Pool Depth
Max = 30

15

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 4.0 meters (> 13') [30 pts] | <input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] |
| <input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] | <input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts] |
| <input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] | |

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

5

Bankfull
Width
Max=30

20

This Information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

| | | |
|-------------------------------------|-------------------------------------|----------------|
| L | R | (Per Bank) |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Wide >10m |
| <input type="checkbox"/> | <input type="checkbox"/> | Moderate 5-10m |
| <input type="checkbox"/> | <input type="checkbox"/> | Narrow <5m |
| <input type="checkbox"/> | <input type="checkbox"/> | None |

COMMENTS

FLOODPLAIN QUALITY

| | | |
|-------------------------------------|-------------------------------------|-------------------------------------|
| L | R | (Most Predominant per Bank) |
| <input type="checkbox"/> | <input type="checkbox"/> | Mature Forest, Wetland |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Immature Forest, Shrub or Old Field |
| <input type="checkbox"/> | <input type="checkbox"/> | Residential, Park, New Field |
| <input type="checkbox"/> | <input type="checkbox"/> | Fenced Pasture |

| | | |
|--------------------------|--------------------------|------------------------|
| L | R | |
| <input type="checkbox"/> | <input type="checkbox"/> | Conservation Tillage |
| <input type="checkbox"/> | <input type="checkbox"/> | Urban or Industrial |
| <input type="checkbox"/> | <input type="checkbox"/> | Open Pasture, Row Crop |
| <input type="checkbox"/> | <input type="checkbox"/> | Mining or Construction |

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

| | |
|---|--|
| <input checked="" type="checkbox"/> Stream Flowing | <input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent) |
| <input type="checkbox"/> Subsurface flow with isolated pools (Interstitial) | <input type="checkbox"/> Dry channel, no water (Ephemeral) |

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

| | | | |
|-------------------------------|------------------------------|---|------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> 1.0 | <input type="checkbox"/> 2.0 | <input type="checkbox"/> 3.0 |
| <input type="checkbox"/> 0.5 | <input type="checkbox"/> 1.5 | <input checked="" type="checkbox"/> 2.5 | <input type="checkbox"/> >3 |

STREAM GRADIENT ESTIMATE

☐ Flat (<0.5 ft/100 ft) ☐ Flat to Moderate ☒ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.67 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar-Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 4/5/2017 Quantity: 1.25"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 15/

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) N If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

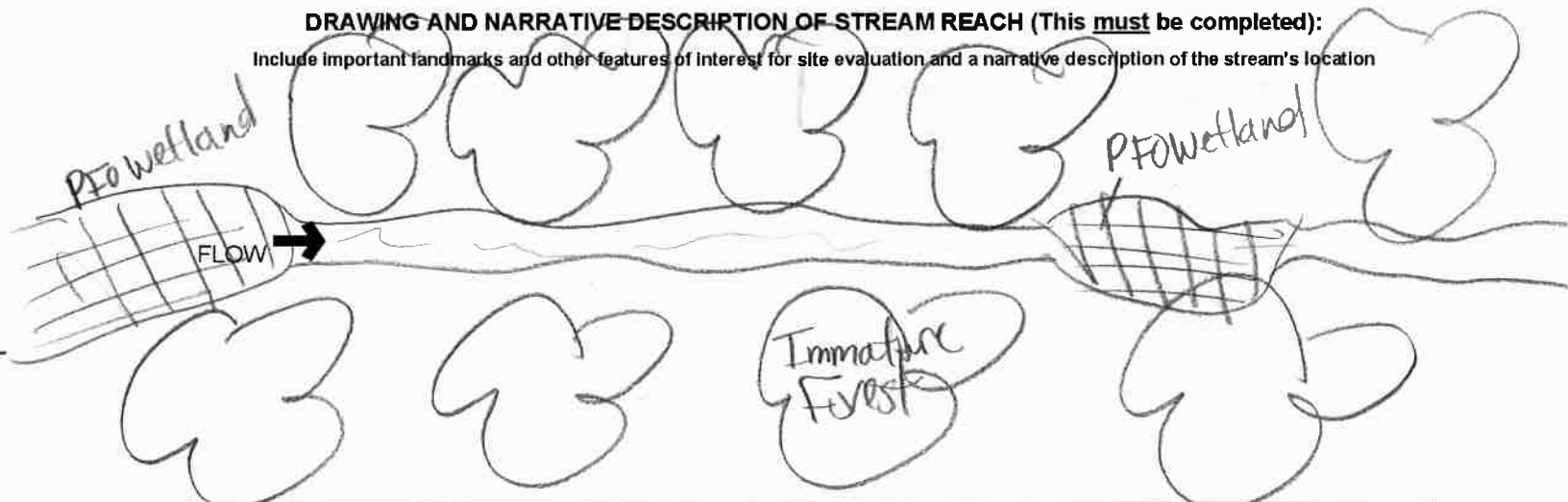
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

39

SITE NAME/LOCATION ACP - SOUTH CANYON
SOLO SITE NUMBER RIVER BASIN Tuscarawas DRAINAGE AREA (mi²) 0.10 sq mi
LENGTH OF STREAM REACH (ft) 200 LAT. 40.70924 LONG. 81.41281 RIVER CODE RIVER MILE
DATE 9/12/2017 SCORER KLV COMMENTS SOLO

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL ☐ NONE / NATURAL CHANNEL ☒ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

MODIFICATIONS: surface mining

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

| TYPE | PERCENT | TYPE | PERCENT |
|--|-----------|---|-----------|
| <input type="checkbox"/> BLDR SLABS [16 pts] | | <input type="checkbox"/> SILT [3 pt] | |
| <input type="checkbox"/> BOULDER (>256 mm) [16 pts] | | <input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts] | <u>10</u> |
| <input type="checkbox"/> BEDROCK [16 pt] | | <input type="checkbox"/> FINE DETRITUS [3 pts] | |
| <input type="checkbox"/> COBBLE (65-256 mm) [12 pts] | <u>15</u> | <input type="checkbox"/> CLAY or HARDPAN [0 pt] | |
| <input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts] | <u>25</u> | <input type="checkbox"/> MUCK [0 pts] | |
| <input checked="" type="checkbox"/> SAND (<2 mm) [6 pts] | <u>30</u> | <input type="checkbox"/> ARTIFICIAL [3 pts] | |

Total of Percentages of
Bltr Slabs, Boulder, Cobble, Bedrock 15

(A) 15

(B) 4

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

19

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 30 centimeters [20 pts] | <input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts] |
| <input type="checkbox"/> > 22.5 - 30 cm [30 pts] | <input type="checkbox"/> < 5 cm [5 pts] |
| <input type="checkbox"/> > 10 - 22.5 cm [25 pts] | <input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts] |

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

| | |
|---|--|
| <input type="checkbox"/> > 4.0 meters (> 13') [30 pts] | <input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] |
| <input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] | <input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts] |
| <input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] | |

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

Pool Depth
Max = 30

15

Bankfull
Width
Max=30

5

This Information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

| RIPARIAN WIDTH | | FLOODPLAIN QUALITY | |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| L | R | L | R |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

COMMENTS

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

| | |
|---|--|
| <input checked="" type="checkbox"/> Stream Flowing | <input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent) |
| <input type="checkbox"/> Subsurface flow with isolated pools (Interstitial) | <input type="checkbox"/> Dry channel, no water (Ephemeral) |

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

| | | | |
|-------------------------------|------------------------------|---|------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> 1.0 | <input checked="" type="checkbox"/> 2.0 | <input type="checkbox"/> 3.0 |
| <input type="checkbox"/> 0.5 | <input type="checkbox"/> 1.5 | <input type="checkbox"/> 2.5 | <input type="checkbox"/> >3 |

STREAM GRADIENT ESTIMATE

| | | | | |
|---|---|--|---|--|
| <input type="checkbox"/> Flat (0.5 ft/100 ft) | <input type="checkbox"/> Flat to Moderate | <input checked="" type="checkbox"/> Moderate (2 ft/100 ft) | <input type="checkbox"/> Moderate to Severe | <input type="checkbox"/> Severe (10 ft/100 ft) |
|---|---|--|---|--|

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.40 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar & Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 4/5/2017 Quantity: 6.25"
Photograph Information: _____
Elevated Turbidity? (Y/N): N Canopy (% open): 45%
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____
Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____
Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

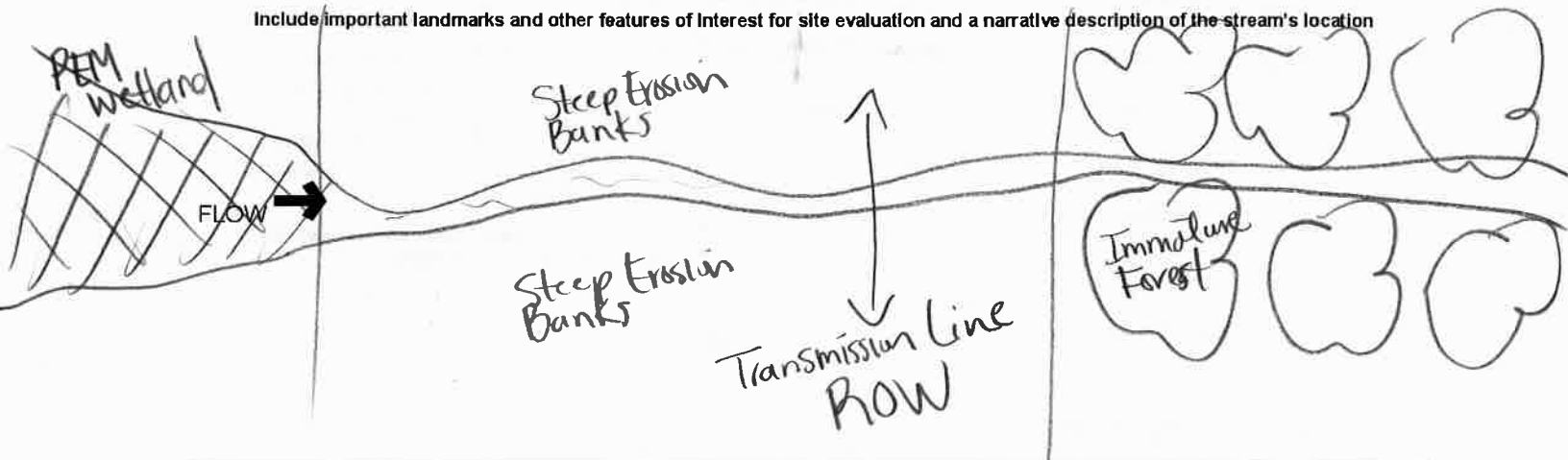
Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Surface mining

- 20

June 20, 2003 Revision

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.76 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: 4.25"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 15%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

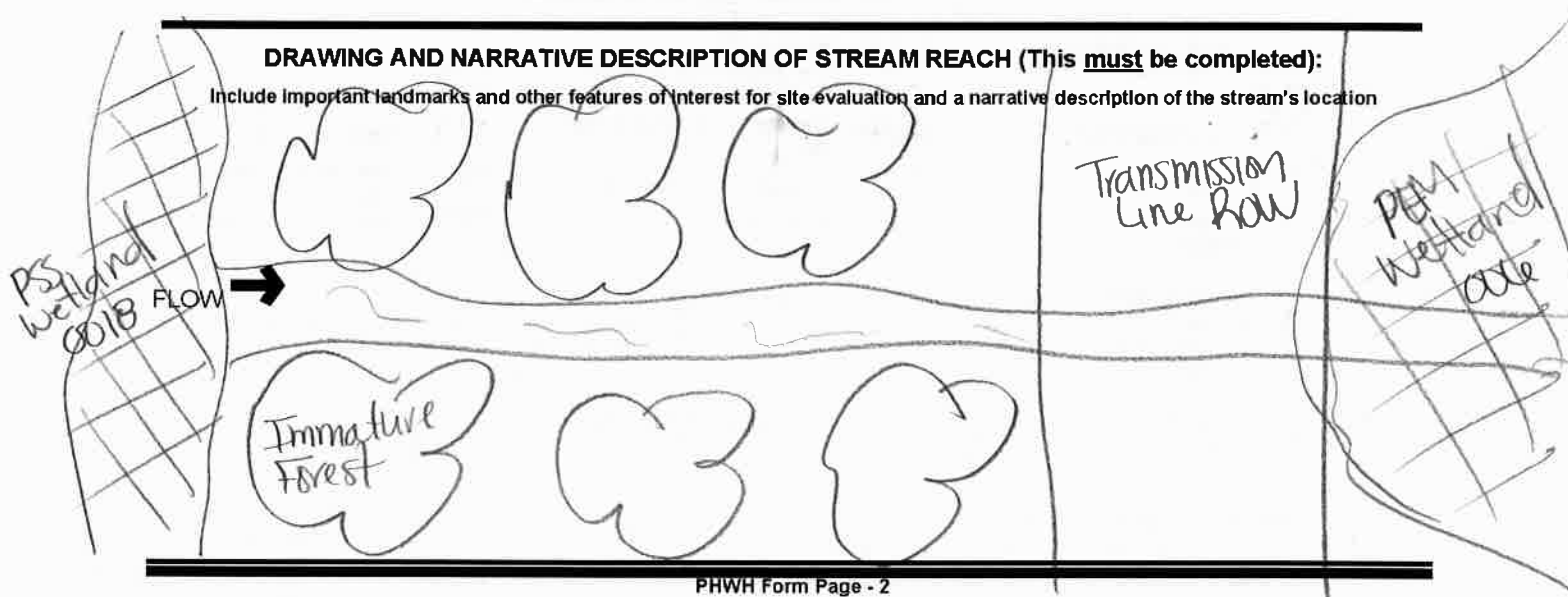
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

28

SITE NAME/LOCATION AEP - SOUTH CANTON
SO12 SITE NUMBER Tuscarawas R. RIVER BASIN 0.01 sq mi DRAINAGE AREA (mi²)
LENGTH OF STREAM REACH (ft) 65 LAT. 40.70939 LONG. -81.41819 RIVER CODE SO12 RIVER MILE
DATE 9/13/2017 SCORER KLV COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL ☐ NONE / NATURAL CHANNEL ☒ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

MODIFICATIONS:

surface mining

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

| TYPE | PERCENT | TYPE | PERCENT |
|--|---------|---|-----------|
| <input type="checkbox"/> BLDG SLABS [16 pts] | | <input checked="" type="checkbox"/> SILT [3 pt] | <u>20</u> |
| <input type="checkbox"/> BOULDER (>256 mm) [16 pts] | | <input checked="" type="checkbox"/> LEAF PACKWOODY DEBRIS [3 pts] | <u>20</u> |
| <input type="checkbox"/> BEDROCK [16 pt] | | <input type="checkbox"/> FINE DETRITUS [3 pts] | |
| <input type="checkbox"/> COBBLE (65-256 mm) [12 pts] | | <input type="checkbox"/> CLAY or HARDPAN [0 pt] | |
| <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts] | | <input type="checkbox"/> MUCK [0 pts] | |
| <input type="checkbox"/> SAND (<2 mm) [6 pts] | | <input type="checkbox"/> ARTIFICIAL [3 pts] | |

Total of Percentages of
Bldr Slabs, Boulder, Cobble, Bedrock

0

(A)

6

(B)

2

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

8

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

| | |
|--|---|
| <input type="checkbox"/> > 30 centimeters [20 pts] | <input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts] |
| <input type="checkbox"/> > 22.5 - 30 cm [30 pts] | <input type="checkbox"/> < 5 cm [5 pts] |
| <input type="checkbox"/> > 10 - 22.5 cm [25 pts] | <input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts] |

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

10cm

Pool Depth
Max = 30

15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

| | |
|---|---|
| <input type="checkbox"/> > 4.0 meters (> 13') [30 pts] | <input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] |
| <input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] | <input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts] |
| <input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] | |

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

3'

Bankfull
Width
Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

NOTE: River Left (L) and Right (R) as looking downstream

RIPARIAN ZONE AND FLOODPLAIN QUALITY

| L | R | (Per Bank) |
|-------------------------------------|-------------------------------------|----------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Wide >10m |
| <input type="checkbox"/> | <input type="checkbox"/> | Moderate 5-10m |
| <input type="checkbox"/> | <input type="checkbox"/> | Narrow <5m |
| <input type="checkbox"/> | <input type="checkbox"/> | None |

COMMENTS

FLOODPLAIN QUALITY

| L | R | (Most Predominant per Bank) |
|-------------------------------------|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Mature Forest, Wetland |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Immature Forest, Shrub or Old Field |
| <input type="checkbox"/> | <input type="checkbox"/> | Residential, Park, New Field |
| <input type="checkbox"/> | <input type="checkbox"/> | Fenced Pasture |

| L | R | |
|--------------------------|--------------------------|------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Conservation Tillage |
| <input type="checkbox"/> | <input type="checkbox"/> | Urban or Industrial |
| <input type="checkbox"/> | <input type="checkbox"/> | Open Pasture, Row Crop |
| <input type="checkbox"/> | <input type="checkbox"/> | Mining or Construction |

- FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

| | |
|---|--|
| <input checked="" type="checkbox"/> Stream Flowing | <input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent) |
| <input type="checkbox"/> Subsurface flow with isolated pools (Interstitial) | <input type="checkbox"/> Dry channel, no water (Ephemeral) |

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

| | | | |
|-------------------------------|---|------------------------------|------------------------------|
| <input type="checkbox"/> None | <input checked="" type="checkbox"/> 1.0 | <input type="checkbox"/> 2.0 | <input type="checkbox"/> 3.0 |
| <input type="checkbox"/> 0.5 | <input type="checkbox"/> 1.5 | <input type="checkbox"/> 2.5 | <input type="checkbox"/> >3 |

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☒ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.83 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar & Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: < 25"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 30%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

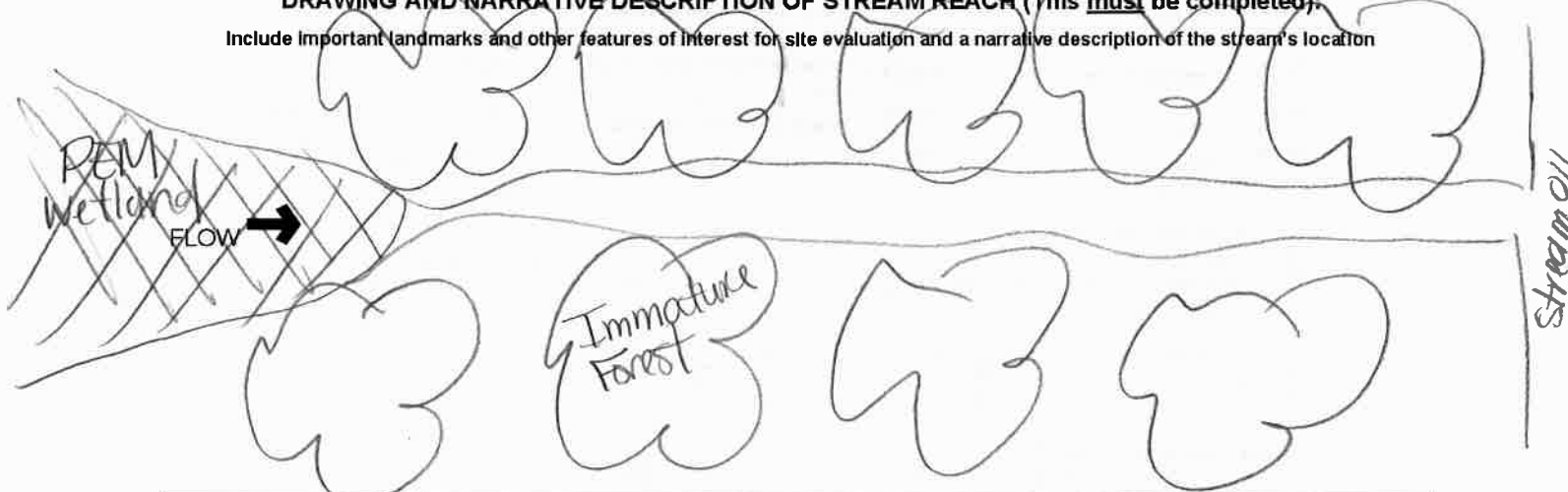
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.87 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar & Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Rike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: 1.25"

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 15%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N): Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

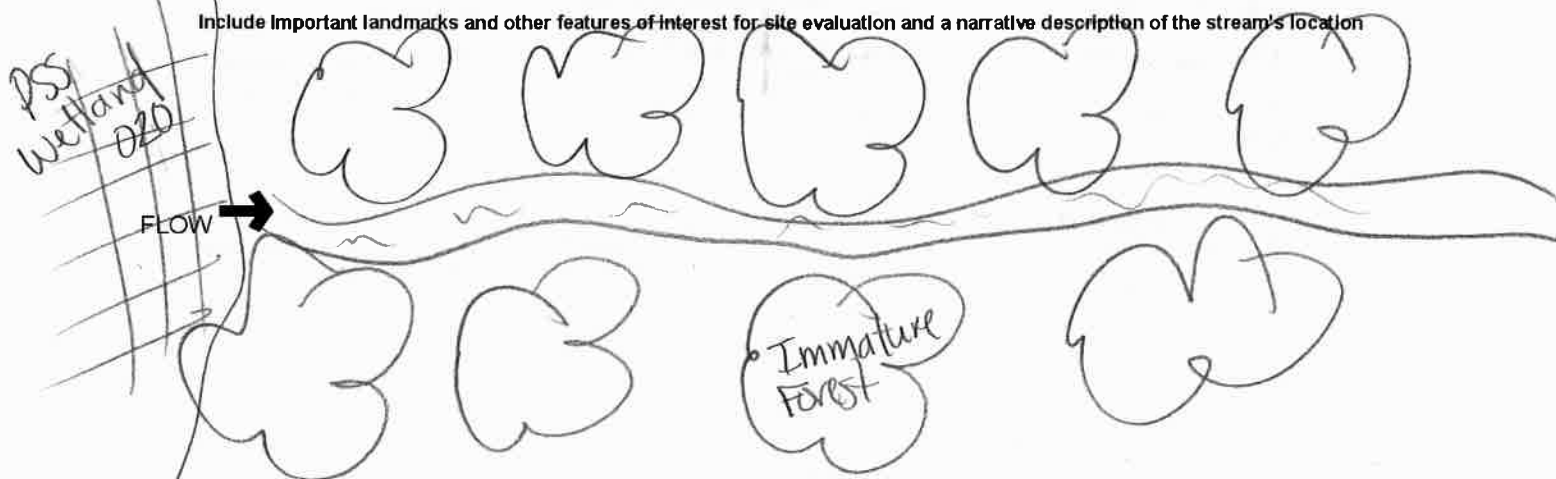
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N): N Voucher? (Y/N): N Salamanders Observed? (Y/N): N Voucher? (Y/N): N
Frogs or Tadpoles Observed? (Y/N): N Voucher? (Y/N): N Aquatic Macroinvertebrates Observed? (Y/N): N Voucher? (Y/N): N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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





Primary Headwater Habitat Evaluation Form

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

31

SITE NAME/LOCATION APP South Canton

5014

SITE NUMBER

RIVER BASIN Tuscarawas R.

DRAINAGE AREA (mi²) 0.079

LENGTH OF STREAM REACH (ft) 200 LAT. 40.70735 LONG. -81.4214 RIVER CODE _____ RIVER MILE _____

DATE 9/13/2017 SCORER KLK COMMENTS 5014

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL



NONE / NATURAL CHANNEL



RECOVERED



RECOVERING



RECENT OR NO RECOVERY

MODIFICATIONS:

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

| TYPE | | PERCENT | TYPE | | PERCENT |
|-------------------------------------|-----------------------------|-----------|-------------------------------------|--------------------------------|-----------|
| <input type="checkbox"/> | BLDR SLABS [16 pts] | | <input checked="" type="checkbox"/> | SILT [3 pt] | <u>30</u> |
| <input type="checkbox"/> | BOULDER (>256 mm) [16 pts] | | <input type="checkbox"/> | LEAF PACK/WOODY DEBRIS [3 pts] | <u>15</u> |
| <input type="checkbox"/> | BEDROCK [16 pt] | | <input type="checkbox"/> | FINE DETRITUS [3 pts] | |
| <input type="checkbox"/> | COBBLE (65-256 mm) [12 pts] | <u>15</u> | <input type="checkbox"/> | CLAY or HARDPAN [0 pt] | |
| <input checked="" type="checkbox"/> | GRAVEL (2-64 mm) [9 pts] | <u>20</u> | <input type="checkbox"/> | MUCK [0 pts] | |
| <input type="checkbox"/> | SAND (<2 mm) [6 pts] | | <input type="checkbox"/> | ARTIFICIAL [3 pts] | |

Total of Percentages of
Bldr Slabs, Boulder, Cobble, Bedrock 15

(A) 12

(B) 4

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

16

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

| | | | |
|--------------------------|---------------------------|-------------------------------------|-----------------------------------|
| <input type="checkbox"/> | > 30 centimeters [20 pts] | <input type="checkbox"/> | > 5 cm - 10 cm [15 pts] |
| <input type="checkbox"/> | > 22.5 - 30 cm [30 pts] | <input checked="" type="checkbox"/> | < 5 cm [5 pts] |
| <input type="checkbox"/> | > 10 - 22.5 cm [25 pts] | <input checked="" type="checkbox"/> | NO WATER OR MOIST CHANNEL [0 pts] |

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

0

Pool Depth
Max = 30

0

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check ONLY one box):

| | | | |
|--------------------------|--|-------------------------------------|--|
| <input type="checkbox"/> | > 4.0 meters (> 13') [30 pts] | <input checked="" type="checkbox"/> | > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] |
| <input type="checkbox"/> | > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] | <input type="checkbox"/> | ≤ 1.0 m (≤ 3' 3") [5 pts] |
| <input type="checkbox"/> | > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] | | |

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

4'

Bankfull
Width
Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

| | | |
|-------------------------------------|-------------------------------------|----------------|
| L | R | (Per Bank) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Wide >10m |
| <input type="checkbox"/> | <input type="checkbox"/> | Moderate 5-10m |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Narrow <5m |
| <input type="checkbox"/> | <input type="checkbox"/> | None |

COMMENTS

FLOODPLAIN QUALITY

| | | |
|-------------------------------------|--------------------------|-------------------------------------|
| L | R | (Most Predominant per Bank) |
| <input type="checkbox"/> | <input type="checkbox"/> | Mature Forest, Wetland |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Immature Forest, Shrub or Old Field |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Residential, Park, New Field |
| <input type="checkbox"/> | <input type="checkbox"/> | Fenced Pasture |

| | | |
|--------------------------|--------------------------|------------------------|
| L | R | |
| <input type="checkbox"/> | <input type="checkbox"/> | Conservation Tillage |
| <input type="checkbox"/> | <input type="checkbox"/> | Urban or Industrial |
| <input type="checkbox"/> | <input type="checkbox"/> | Open Pasture, Row Crop |
| <input type="checkbox"/> | <input type="checkbox"/> | Mining or Construction |

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

| | | | |
|--------------------------|--|-------------------------------------|---|
| <input type="checkbox"/> | Stream Flowing | <input type="checkbox"/> | Moist Channel, isolated pools, no flow (Intermittent) |
| <input type="checkbox"/> | Subsurface flow with isolated pools (Interstitial) | <input checked="" type="checkbox"/> | Dry channel, no water (Ephemeral) |

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

| | | | | | | | |
|--------------------------|------|--------------------------|-----|-------------------------------------|-----|--------------------------|-----|
| <input type="checkbox"/> | None | <input type="checkbox"/> | 1.0 | <input checked="" type="checkbox"/> | 2.0 | <input type="checkbox"/> | 3.0 |
| <input type="checkbox"/> | 0.5 | <input type="checkbox"/> | 1.5 | <input type="checkbox"/> | 2.5 | <input type="checkbox"/> | >3 |

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☒ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

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

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Bear Run Distance from Evaluated Stream 0.98 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Bolivar-Waynesburg NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Stark Co. Township / City: Pike Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/5/2017 Quantity: 4.25"
Photograph Information: _____
Elevated Turbidity? (Y/N): N Canopy (% open): 151
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____
Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____
Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

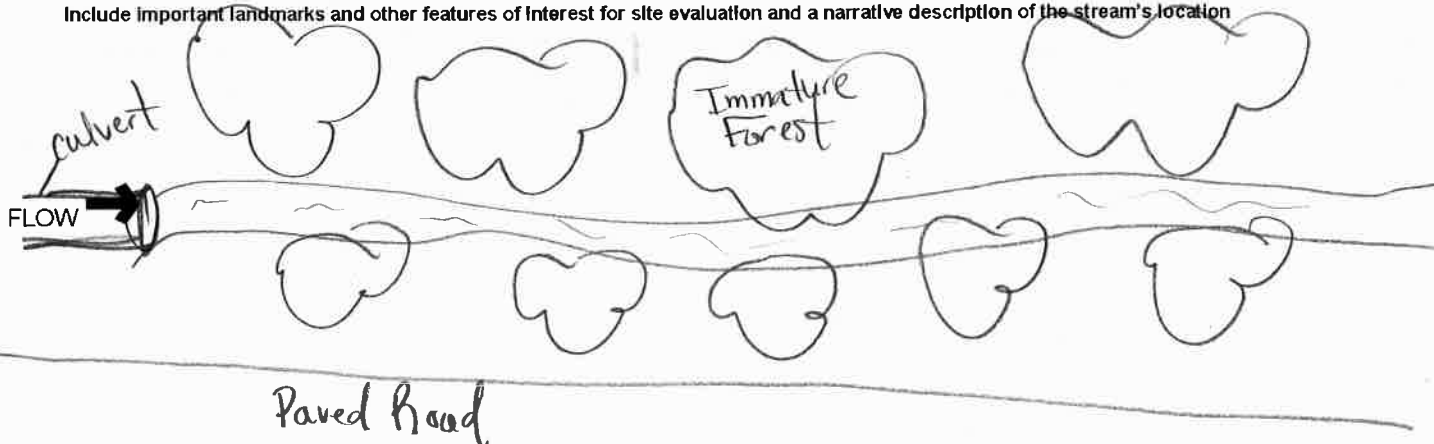
Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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



APPENDIX D

Ohio Rapid Assessment Method for Wetlands (ORAM) Data Forms

Site: NEP-South Canton

Rater(s): KLV

Date: 9/7/2017

| | |
|------------|----------|
| 2 | 2 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W001-PEM-CATMOD 2
W001-PUB-CATMOD 2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 5 | 7 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☒ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

4

| | |
|-------------|----------|
| 20 | 27 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☒ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☒ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☐ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☐ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☒ other pre-law mining

| | |
|-------------|----------|
| 7 | 34 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☒ Recovering (3)
- ☒ Recent or no recovery (1)

Check all disturbances observed

- ☒ mowing
- ☐ grazing
- ☐ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☒ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|----|
| 34 |
|----|

subtotal this page

| | | |
|-------------------------------|----------------------|-----------------------|
| Site: AEP-South Canton | Rater(s): KLV | Date: 9/7/2017 |
|-------------------------------|----------------------|-----------------------|

34

subtotal first page

W001-PEM-CATMOD2
W001-PUB-CATMOD2

0

34

max 10 pts.
subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

7

41

max 20 pts.
subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high (4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☒ Low (1)
- ☐ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☒ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

41

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|------------------------------|----------------------|-----------------------|
| Site: AP-South Canton | Rater(s): KLV | Date: 9/7/2017 |
|------------------------------|----------------------|-----------------------|

| | |
|------------|----------|
| 2 | 2 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W002-PFO-CATMOD2
W002-PUB-CATMOD2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 5 | 7 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☒ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 20 | 27 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☐ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☒ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☒ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☐ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☒ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☒ other stripmine

| | |
|-------------|----------|
| 8 | 35 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☒ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☐ Recovered (6)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☒ mowing
- ☐ grazing
- ☐ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☒ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|--------------------|
| 35 |
| subtotal this page |

| | | |
|-------------------------------|----------------------|-----------------------|
| Site: <u>ATP-South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>9/7/2017</u> |
|-------------------------------|----------------------|-----------------------|

35

subtotal first page

W002-PFO-CATMOD2
W002-PLB-CATMOD2

| | |
|-------------|----------|
| 0 | 35 |
| max 10 pts. | subtotal |

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

| | |
|-------------|----------|
| 8 | 43 |
| max 20 pts. | subtotal |

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high (4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☒ Low (1)
- ☐ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

43

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|---------------------------------|----------------------|-----------------------|
| Site: AEP - South Canton | Rater(s): KLV | Date: 9/7/2017 |
|---------------------------------|----------------------|-----------------------|

| | |
|------------|----------|
| 2 | 2 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W003-PEM-CAT2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 5 | 7 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 18 | 25 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☐ Precipitation (1)
- ☐ Seasonal/intermittent surface water (3)
- ☒ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☒ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☒ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

| | |
|--|---|
| Check all disturbances observed | |
| <input type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input type="checkbox"/> stormwater input | <input checked="" type="checkbox"/> point source (nonstormwater) <input type="checkbox"/> filling/grading <input type="checkbox"/> road bed/RR track <input checked="" type="checkbox"/> dredging <input checked="" type="checkbox"/> other <i>Strip mine</i> |

| | |
|-------------|----------|
| 8 | 33 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

| | |
|---|---|
| Check all disturbances observed | |
| <input checked="" type="checkbox"/> mowing <input type="checkbox"/> grazing <input type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants | <input checked="" type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment |

| |
|----|
| 33 |
|----|

subtotal this page

| | | |
|-------------------------------|----------------------|-----------------------|
| Site: AEP-South Canton | Rater(s): KLV | Date: 9/7/2017 |
|-------------------------------|----------------------|-----------------------|

33

subtotal first page

W003-PEM-CAT2

| | |
|-------------|----------|
| 0 | 33 |
| max 10 pts. | subtotal |

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

| | |
|-------------|----------|
| 1 | 34 |
| max 20 pts. | subtotal |

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☒ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☒ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

34

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|--------------------------------------|-----------------------------|------------------------------|
| Site: <u>ATP South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>9/7/2017</u> |
|--------------------------------------|-----------------------------|------------------------------|

| | |
|------------|----------|
| 1 | 1 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W004-PUB-CATMOD 2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 8 | 9 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5) 4
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 19 | 28 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☒ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☐ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☒ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input checked="" type="checkbox"/> other <u>Strip mine</u> |

| | |
|-------------|----------|
| 10 | 38 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> mowing | <input type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input type="checkbox"/> woody debris removal | <input type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

| |
|----|
| 38 |
|----|

subtotal this page

Site: ATP-South Canton Rater(s): KLV Date: 9/7/2017

38
subtotal first page

W004-PUB-CATMOD 2

0 38
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

3 41
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

41

End of Quantitative Rating. Complete Categorization Worksheets.

Site: ALP-South Canton Rater(s): KLV Date: 9/8/2017

| | |
|------------|----------|
| 0 | 0 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W005-FEM-CAT MOD2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☒ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 9 | 9 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 18 | 27 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☐ Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☒ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☒ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☐ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☐ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☒ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input checked="" type="checkbox"/> other <u>Strip mine</u> |

| | |
|-------------|----------|
| 10 | 37 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> mowing | <input type="checkbox"/> shrub/sapling removal |
| <input checked="" type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input type="checkbox"/> woody debris removal | <input type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

| |
|--------------------|
| 37 |
| subtotal this page |

| | | |
|--------------------------------------|-----------------------------|------------------------------|
| Site: <u>APP-South Canton</u> | Rater(s): <u>KLW</u> | Date: <u>9/8/2017</u> |
|--------------------------------------|-----------------------------|------------------------------|

37

subtotal first page

0

37

max 10 pts.
subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

0

37

max 20 pts.
subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☒ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

37

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|-------------------------------|----------------------|-----------------------|
| Site: AEP South Canton | Rater(s): KLV | Date: 9/8/2017 |
|-------------------------------|----------------------|-----------------------|

| | |
|------------|----------|
| 3 | 3 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W006-PEM-CAT2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☒ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 8 | 11 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 18 | 29 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/intermittent surface water (3)
- ☒ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☒ Part of wetland/upland (e.g. forest), complex (1)
- ☒ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☒ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|--|
| <input type="checkbox"/> ditch | <input checked="" type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input checked="" type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input checked="" type="checkbox"/> other <u>Stripmine</u> |

| | |
|-------------|----------|
| 7 | 36 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input type="checkbox"/> woody debris removal | <input type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

| |
|----|
| 36 |
|----|

subtotal this page

Site: AEP - South Canton Rater(s): KLV Date: 9/8/2017

36
subtotal first page

W006-PEM-CAT2

0 36
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

-2 34
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☒ Vegetated hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

34

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|---------------------------------|----------------------|------------------------|
| Site: AEP - South Canton | Rater(s): KLV | Date: 9/11/2017 |
|---------------------------------|----------------------|------------------------|

| | |
|------------|----------|
| 0 | 0 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W007-PEM-CAT2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☒ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 6 | 6 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 16 | 22 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☒ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☐ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☐ dredging
- ☐ other

| | |
|-------------|----------|
| 10 | 32 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☐ grazing
- ☒ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|----|
| 32 |
|----|

subtotal this page

Site: APP South Canton Rater(s): KLW Date: 9/11/2017

32
subtotal first page

W007-PEM-CAT 2

0 32
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

2 34
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

34

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|--------------------------------------|-----------------------------|-------------------------------|
| Site: <u>APP South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>9/11/2017</u> |
|--------------------------------------|-----------------------------|-------------------------------|

| | |
|------------|----------|
| 1 | 1 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).WOOB-DEM-CAT2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 5 | 6 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
☒ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 16 | 22 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
☐ Other groundwater (3)
☒ Precipitation (1)
☒ Seasonal/Intermittent surface water (3)
☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
☒ Recovered (7)
☐ Recovering (3)
☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
☐ Between stream/lake and other human use (1)
☐ Part of wetland/upland (e.g. forest), complex (1)
☒ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
☒ Regularly inundated/saturated (3)
☐ Seasonally inundated (2)
☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
☐ tile
☐ dike
☐ weir
☐ stormwater input

- ☐ point source (nonstormwater)
☒ filling/grading
☒ road bed/RR track
☒ dredging
☒ other Strip mine

| | |
|-------------|----------|
| 10 | 32 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
☐ Recovered (3)
☐ Recovering (2)
☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
☐ Very good (6)
☐ Good (5)
☐ Moderately good (4)
☐ Fair (3)
☐ Poor to fair (2)
☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
☐ Recovered (6)
☐ Recovering (3)
☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
☐ grazing
☒ clearcutting
☐ selective cutting
☐ woody debris removal
☐ toxic pollutants

- ☐ shrub/sapling removal
☐ herbaceous/aquatic bed removal
☐ sedimentation
☐ dredging
☐ farming
☐ nutrient enrichment

| |
|----|
| 32 |
|----|

subtotal this page

Site: AEP - South Canton **Rater(s):** KLV **Date:** 9/11/2017

32
subtotal first page

W008-PEM-CAT2

0 32
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

2 34
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ 0 Aquatic bed
- ☐ 1 Emergent
- ☐ 0 Shrub
- ☐ 0 Forest
- ☐ 0 Mudflats
- ☐ 0 Open water
- ☐ 0 Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high (4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☒ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ 0 Vegetated hummocks/tussocks
- ☐ 0 Coarse woody debris >15cm (6in)
- ☐ 0 Standing dead >25cm (10in) dbh
- ☐ 0 Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

34

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|--------------------------------------|-----------------------------|-------------------------------|
| Site: <u>ATP South Canton</u> | Rater(s): <u>KLW</u> | Date: <u>9/11/2017</u> |
|--------------------------------------|-----------------------------|-------------------------------|

| | |
|------------|----------|
| <u>2</u> | <u>2</u> |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W009-PEM-CAT 2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|-----------|
| <u>8</u> | <u>10</u> |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|-----------|
| <u>12</u> | <u>22</u> |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☒ Precipitation (1)
- ☐ Seasonal/intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☒ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☒ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input checked="" type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input checked="" type="checkbox"/> other <u>strip mine</u> |

| | |
|-------------|-----------|
| <u>10</u> | <u>32</u> |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☒ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|--|---|
| <input checked="" type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input checked="" type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input type="checkbox"/> woody debris removal | <input type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

| |
|-----------|
| <u>32</u> |
|-----------|

subtotal this page

| | | |
|---------------------------------|----------------------|------------------------|
| Site: AEP - South Canton | Rater(s): KLV | Date: 9/11/2017 |
|---------------------------------|----------------------|------------------------|

32

subtotal first page

W009-PEM-CAT2

| | |
|-------------|----------|
| 0 | 32 |
| max 10 pts. | subtotal |

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

| | |
|-------------|----------|
| 2 | 34 |
| max 20 pts. | subtotal |

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

34

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|------------------------------|----------------------|------------------------|
| Site: AP-South Canton | Rater(s): KLV | Date: 9/11/2017 |
|------------------------------|----------------------|------------------------|

| | |
|------------|----------|
| 0 | 0 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size). *W100-PEM-CAT2*

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 5 | 5 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☒ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5) *4*
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 16 | 21 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☒ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☒ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input type="checkbox"/> stormwater input | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> point source (nonstormwater) <input type="checkbox"/> filling/grading <input type="checkbox"/> road bed/RR track <input checked="" type="checkbox"/> dredging <input type="checkbox"/> other <i>Strip mine</i> |
|--|--|

| | |
|-------------|----------|
| 10 | 31 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> mowing <input type="checkbox"/> grazing <input checked="" type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants | <ul style="list-style-type: none"> <input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment |
|---|--|

| |
|----|
| 31 |
|----|

subtotal this page

| | | |
|--------------------------------------|-----------------------------|-------------------------------|
| Site: <u>APP-South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>9/11/2017</u> |
|--------------------------------------|-----------------------------|-------------------------------|

31

subtotal first page

W010-PEM-CAT2

0

31

max 10 pts.
subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

2

33

max 20 pts.
subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

33

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|-------------------------------|----------------------|------------------------|
| Site: AEP-South Canton | Rater(s): KLV | Date: 9/12/2017 |
|-------------------------------|----------------------|------------------------|

| | |
|------------|----------|
| 0 | 0 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W011-PFO-CATMOD2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 12 | 12 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 16 | 28 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☒ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☒ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☒ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☒ other Strip mine

| | |
|-------------|----------|
| 10 | 38 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☐ grazing
- ☒ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|--------------------|
| 38 |
| subtotal this page |

| | | |
|-------------------------------|----------------------|------------------------|
| Site: <u>ATP South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>9/12/2017</u> |
|-------------------------------|----------------------|------------------------|

38

subtotal first page

W011-PFO-CATMOD2

0

38

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

2

40

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☒ Aquatic bed
- ☒ Emergent
- ☒ Shrub
- ☒ Forest
- ☒ Mudflats
- ☒ Open water
- ☒ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☒ Vegetated hummocks/tussucks
- ☒ Coarse woody debris >15cm (6in)
- ☒ Standing dead >25cm (10in) dbh
- ☒ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

40

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|-------------------------------|----------------------|------------------------|
| Site: AEP South Canton | Rater(s): KLV | Date: 9/12/2017 |
|-------------------------------|----------------------|------------------------|

| | |
|------------|----------|
| 0 | 0 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W012-PFO -CAT1

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 5 | 5 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 12 | 17 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☒ Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☒ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☐ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☐ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☒ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☒ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☒ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☒ other strip mine

| | |
|-------------|----------|
| 10 | 27 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☐ grazing
- ☒ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|--------------------|
| 27 |
| subtotal this page |

Site: AEP South Canton Rater(s): KLW Date: 9/12/2017

27

subtotal first page

W012-PFO-CAT1

0 27

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

2 29

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

29

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|--------------------------------------|-----------------------------|-------------------------------|
| Site: <u>ATP-South Canton</u> | Rater(s): <u>KLJ</u> | Date: <u>9/12/2017</u> |
|--------------------------------------|-----------------------------|-------------------------------|

| | |
|------------|----------|
| 0 | 0 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size). W013-PFO-CATMOD2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 9 | 9 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 16 | 25 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☒ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☒ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☒ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☒ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☒ other strip mine

| | |
|-------------|----------|
| 10 | 35 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☒ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☒ grazing
- ☐ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|--------------------|
| 35 |
| subtotal this page |

| | | |
|--------------------------------------|-----------------------------|-------------------------------|
| Site: <u>ATP-South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>9/12/2017</u> |
|--------------------------------------|-----------------------------|-------------------------------|

35

subtotal first page

W013-PFO-CAT MOD 2

| | |
|-------------|----------|
| 0 | 35 |
| max 10 pts. | subtotal |

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

| | |
|-------------|----------|
| 2 | 37 |
| max 20 pts. | subtotal |

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☒ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

37

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|---------------------------------|----------------------|------------------------|
| Site: AEP - South Canton | Rater(s): KLV | Date: 9/12/2017 |
|---------------------------------|----------------------|------------------------|

| | |
|------------|----------|
| 2 | 2 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W014-PEM-CAT2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 5 | 7 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☒ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 15 | 22 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☒ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☒ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|--|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input type="checkbox"/> stormwater input | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> point source (nonstormwater) <input checked="" type="checkbox"/> filling/grading <input checked="" type="checkbox"/> road bed/RR track <input checked="" type="checkbox"/> dredging <input checked="" type="checkbox"/> other <u>strip mine</u> |
|--|---|

| | |
|-------------|----------|
| 10 | 32 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☒ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> mowing <input type="checkbox"/> grazing <input checked="" type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants | <ul style="list-style-type: none"> <input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment |
|---|--|

| |
|--------------------|
| 32 |
| subtotal this page |

| | | |
|--|-----------------------------|-------------------------------|
| Site: <u>ATP - South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>9/12/2017</u> |
|--|-----------------------------|-------------------------------|

32

subtotal first page

W014-PEM-CAT2

| | |
|-------------|----------|
| 0 | 32 |
| max 10 pts. | subtotal |

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

| | |
|-------------|----------|
| -2 | 30 |
| max 20 pts. | subtotal |

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

30

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|-------------------------------|----------------------|------------------------|
| Site: AEP-South Canton | Rater(s): KLV | Date: 9/12/2017 |
|-------------------------------|----------------------|------------------------|

| | |
|------------|----------|
| 2 | 2 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W015-PEM-CATMOD2
W015-PUB-CATMOD2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 4 | 6 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☒ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 24 | 30 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☒ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☒ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☐ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☒ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☒ point source (nonstormwater)
- ☐ filling/grading
- ☐ road bed/RR track
- ☒ dredging
- ☒ other Strip mine

| | |
|-------------|----------|
| 8 | 38 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☒ mowing
- ☒ grazing
- ☒ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☒ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|----|
| 38 |
|----|

subtotal this page

Site: AEP - South Canton Rater(s): KLW Date: 9/12/2017

38

subtotal first page

W015-PEM - CATMOD 2
W015-PUB - CATMOD 2

0 38

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

4 42

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

42

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|-------------------------------|----------------------|------------------------|
| Site: AEP South Canton | Rater(s): KLV | Date: 9/12/2017 |
|-------------------------------|----------------------|------------------------|

| | |
|------------|----------|
| 1 | 1 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W016-PEM-CAT2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 5 | 6 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 12 | 18 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☒ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☒ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☒ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☒ other *Stripmine*

| | |
|-------------|----------|
| 10 | 28 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☐ grazing
- ☒ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|----|
| 28 |
|----|

subtotal this page

Site: AEP - South Canton Rater(s): KLV Date: 9/12/2017

28
subtotal first page

W016 - PEM-CAT 2

0 28
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1. Qualitative Rating (-10)

4 32
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- 0 Aquatic bed
- 0 Emergent
- 0 Shrub
- 0 Forest
- 0 Mudflats
- 0 Open water
- 0 Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high (4)
- ☐ Moderate (3)
- ☒ Moderately low (2)
- ☐ Low (1)
- ☐ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☒ Nearly absent <5% cover (0)
- ☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- 0 Vegetated hummocks/tussocks
- 0 Coarse woody debris >15cm (6in)
- 0 Standing dead >25cm (10in) dbh
- 0 Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

32

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|-------------------------------|----------------------|------------------------|
| Site: AEP-South Canton | Rater(s): KLV | Date: 9/12/2017 |
|-------------------------------|----------------------|------------------------|

| | |
|------------|----------|
| 1 | 1 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W017-PEM-CAT1

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 4 | 5 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☒ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 11 | 16 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☐ Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☐ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☒ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|--|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input type="checkbox"/> stormwater input | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> point source (nonstormwater) <input checked="" type="checkbox"/> filling/grading <input checked="" type="checkbox"/> road bed/RR track <input checked="" type="checkbox"/> dredging <input checked="" type="checkbox"/> other <u>Strip mine</u> |
|--|---|

| | |
|-------------|----------|
| 7 | 23 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <ul style="list-style-type: none"> <input checked="" type="checkbox"/> mowing <input checked="" type="checkbox"/> grazing <input checked="" type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment |
|---|---|

| |
|----|
| 23 |
|----|

subtotal this page

Site: AEP - South Canton Rater(s): KLV Date: 9/12/2017

23
subtotal first page

W017-PEM-CAT1

0 23
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

0 23
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- 0 Aquatic bed
- 1 Emergent
- 2 Shrub
- 2 Forest
- 0 Mudflats
- 0 Open water
- 0 Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☒ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- 0 Vegetated hummocks/tussocks
- 0 Coarse woody debris >15cm (6in)
- 0 Standing dead >25cm (10in) dbh
- 0 Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

23

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|--------------------------------------|-----------------------------|-------------------------------|
| Site: <u>ATP-South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>8/13/2017</u> |
|--------------------------------------|-----------------------------|-------------------------------|

| | |
|------------|----------|
| 2 | 2 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W018-PEM-CAT2
W018-PSS-CAT2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 9 | 11 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 18 | 29 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☒ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☐ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☐ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☒ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☐ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☒ other strip mine

| | |
|-------------|----------|
| 10 | 39 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☐ grazing
- ☒ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|----|
| 39 |
|----|

subtotal this page

| | | |
|------------------------------|----------------------|------------------------|
| Site: AP South Canton | Rater(s): KLV | Date: 9/13/2017 |
|------------------------------|----------------------|------------------------|

39

subtotal first page

W018-PEM-CAT2
W018-PSS-CAT2

| | |
|---|----|
| 0 | 39 |
|---|----|

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

| | |
|---|----|
| 6 | 45 |
|---|----|

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☒ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☐ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☒ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

45

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|-------------------------------|----------------------|------------------------|
| Site: AEP-South Canton | Rater(s): KLV | Date: 9/13/2017 |
|-------------------------------|----------------------|------------------------|

| | |
|------------|----------|
| 2 | 2 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W019-REM-CAT2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 12 | 14 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 16 | 30 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☐ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☒ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☐ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☐ other *strip mine*

| | |
|-------------|----------|
| 11 | 41 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☐ grazing
- ☒ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|----|
| 41 |
|----|

subtotal this page

| | | |
|--------------------------------------|-----------------------------|-------------------------------|
| Site: <u>ATP South Canton</u> | Rater(s): <u>HLV</u> | Date: <u>9/13/2017</u> |
|--------------------------------------|-----------------------------|-------------------------------|

41

subtotal first page

W019-DEM-CAT2

0

41

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

4

45

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other _____

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

45

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|--|-----------------------------|-------------------------------|
| Site: <u>ATP - South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>9/13/2017</u> |
|--|-----------------------------|-------------------------------|

| | |
|------------|----------|
| 2 | 2 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W020-PSS-CATMOD2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☒ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 9 | 11 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 16 | 27 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☒ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☒ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☐ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☐ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☒ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☐ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☒ other Stripmine

| | |
|-------------|----------|
| 11 | 38 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☒ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☐ grazing
- ☒ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|----|
| 38 |
|----|

subtotal this page

| | | |
|-------------------------------|----------------------|------------------------|
| Site: <u>AEP-South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>9/13/2017</u> |
|-------------------------------|----------------------|------------------------|

38

subtotal first page

W020-PSS-CATMOD 2

| | |
|---|----|
| 0 | 38 |
|---|----|

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

| | |
|---|----|
| 1 | 39 |
|---|----|

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.**6a. Wetland Vegetation Communities.**

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high (4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☒ Low (1)
- ☐ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

39

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|--|-----------------------------|-------------------------------|
| Site: <u>ATP - South Canton</u> | Rater(s): <u>KLV</u> | Date: <u>9/13/2017</u> |
|--|-----------------------------|-------------------------------|

| | |
|------------|----------|
| 0 | 0 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W021 - PUB - CATMOD2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☒ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 9 | 9 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 15 | 24 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☐ Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☒ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☐ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12)
- ☐ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☐ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☒ other strip mine

| | |
|-------------|----------|
| 10 | 34 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☒ None or none apparent (4)
- ☐ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☒ None or none apparent (9)
- ☐ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☐ grazing
- ☒ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|----|
| 34 |
|----|

subtotal this page

Site: APP South Catm Rater(s): KLV Date: 9/13/2017

34

subtotal first page

W021-PUB-CATMOD2

0 34

max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

3 37

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☒ Other

6b. horizontal (plan view) Interspersions.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☒ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

37

End of Quantitative Rating. Complete Categorization Worksheets.

| | | |
|-------------------------------|----------------------|------------------------|
| Site: AEP-South Canton | Rater(s): KLV | Date: 9/13/2017 |
|-------------------------------|----------------------|------------------------|

| | |
|------------|----------|
| 1 | 1 |
| max 6 pts. | subtotal |

Metric 1. Wetland Area (size).

W022-PUB-CATMOD2

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

| | |
|-------------|----------|
| 12 | 13 |
| max 14 pts. | subtotal |

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

| | |
|-------------|----------|
| 15 | 28 |
| max 30 pts. | subtotal |

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☒ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☐ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☒ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☐ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☐ stormwater input

- ☐ point source (nonstormwater)
- ☒ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☒ other ship mine

| | |
|-------------|----------|
| 10 | 38 |
| max 20 pts. | subtotal |

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☐ grazing
- ☒ clearcutting
- ☐ selective cutting
- ☐ woody debris removal
- ☐ toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☐ sedimentation
- ☐ dredging
- ☐ farming
- ☐ nutrient enrichment

| |
|--------------------|
| 38 |
| subtotal this page |

Site: ATP - South Canton Rater(s): KLV Date: 9/13/2017

38

subtotal first page

W022-PUB-CATMOD2

0 38

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

4 42

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

| | |
|---|---|
| 0 | Absent or comprises <0.1ha (0.2471 acres) contiguous area |
| 1 | Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality |
| 2 | Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality |
| 3 | Present and comprises significant part, or more, of wetland's vegetation and is of high quality |

Narrative Description of Vegetation Quality

| | |
|------|--|
| low | Low spp diversity and/or predominance of nonnative or disturbance tolerant native species |
| mod | Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp |
| high | A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp |

Mudflat and Open Water Class Quality

| | |
|---|---|
| 0 | Absent <0.1ha (0.247 acres) |
| 1 | Low 0.1 to <1ha (0.247 to 2.47 acres) |
| 2 | Moderate 1 to <4ha (2.47 to 9.88 acres) |
| 3 | High 4ha (9.88 acres) or more |

Microtopography Cover Scale

| | |
|---|--|
| 0 | Absent |
| 1 | Present very small amounts or if more common of marginal quality |
| 2 | Present in moderate amounts, but not of highest quality or in small amounts of highest quality |
| 3 | Present in moderate or greater amounts and of highest quality |

42

End of Quantitative Rating. Complete Categorization Worksheets.

APPENDIX E

ODNR and USFWS Correspondence

From: susan_zimmermann@fws.gov on behalf of [Ohio, FW3](#)
To: [Allison Wheaton](#)
Cc: nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us
Subject: GAI #C170352.24, AEP South Canton 765 kV Station Security Project, Stark Co.
Date: Friday, September 22, 2017 9:11:24 AM
Attachments: [Capture of Dan.PNG](#)



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



TAILS# 03E15000-2017-TA-1968

Dear Ms. Wheaton,

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

The U.S. Fish and Wildlife Service (Service) recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

FEDERALLY LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the federally endangered **Indiana bat** (*Myotis sodalis*) and the federally threatened **northern long-eared bat** (*Myotis septentrionalis*). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) 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 and abandoned mines.

Should the proposed site contain trees ≥ 3 inches dbh, we recommend that trees be saved wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend that removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is being recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule

(see <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, summer surveys may be conducted to document the presence or probable absence of Indiana bats within the project area during the summer. If a summer survey documents probable absence of Indiana bats, the 4(d) rule for the northern long-eared bat could be applied. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Endangered Species Coordinator for this office. Surveyors must have a valid federal permit. Please note that summer surveys may only be conducted between June 1 and August 15.

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

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

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Dan Everson", is written over a light blue horizontal line.

Dan Everson
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW

Kate Parsons, ODNR-DOW



Canton Office
3720 Dressler Road Northwest
Canton, Ohio 44718

T 330.433.2680
F 330.433.2694

September 7, 2017
Project C170352.24

Environmental Review Staff
Ohio Department of Natural Resources
Division of Wildlife - Ohio Natural Heritage Program
2045 Morse Road, Building G-3
Columbus, Ohio 43229-6693

**American Electric Power
South Canton 765 kV Station Security Project
Request for Technical Assistance Regarding Threatened
and Endangered Species and Critical Habitat
Stark County, Ohio**

Dear Staff:

GAI Consultants, Inc. (GAI), on behalf of American Electric Power (AEP), is requesting information regarding state- and federally-listed threatened and endangered species in the vicinity of the South Canton 765 kV Station Security Project (Project) in Stark County, Ohio. As part of this request, please provide information specific to any threatened and endangered bats. GAI is also requesting the locations of any known golden or bald eagle nests in the area.

The proposed Project involves the installation of a security fence surrounding the existing South Canton 765 kV Substation. The Project study area is approximately 185 acres.

The study area for the Project is shown on the attached map (Figure 1). The study area consists primarily of the existing substation surrounded by maintained transmission line right-of-way and mid-successional hardwood forest. Project shapefiles are included to aid in your review.

GAI and AEP thank you in advance for your assistance. Please contact me at 330.324.9148 or via email at a.wheaton@gaiconsultants.com if you have any questions or require further information.

Sincerely,

GAI Consultants, Inc.

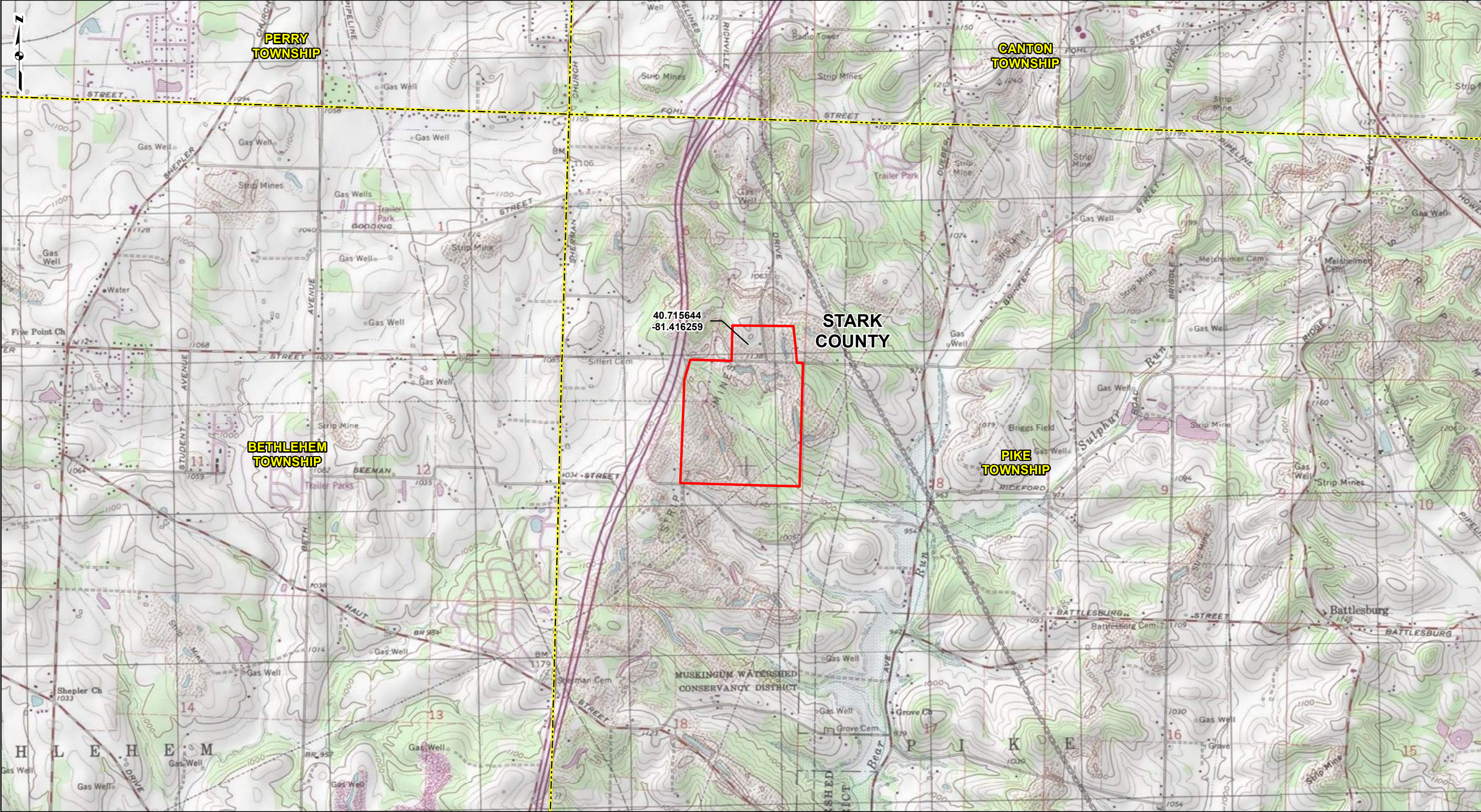
A handwritten signature in blue ink, appearing to read 'Allison R. Wheaton'.

Allison R. Wheaton, WPIT
Senior Project Environmental Specialist

ARW/kea

Attachments: Attachment 1 (Project Location Map)
Project Shapefiles

ATTACHMENT 1
Project Location Map



PROJECT LOCATION



STARK COUNTY, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: BOLIVAR (1978) AND WAYNESBURG (1978), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 09/2017.

LEGEND

- STUDY AREA
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY

0 1,000 2,000 4,000 Feet

PROJECT LOCATION MAP



SOUTH CANTON 765 KV
STATION SECURITY PROJECT
AMERICAN ELECTRIC POWER



DRAWN BY: AKW
CHECKED: EFJ

DATE: 9/6/2017
APPROVED: ARW



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Office of Real Estate
Paul R. Baldrige, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6649
Fax: (614) 267-4764

December 20, 2017

Allison Wheaton
GAI Consultants
3720 Dressler Road NW
Canton, Ohio 44718

Re: 17-704; AEP South Canton 765 kV Station Security Project

Project: The proposed Project involves the installation of a security fence surrounding the existing South Canton 765 kV Substation.

Location: The proposed project is in Pike Township, Stark 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:

Shore-growing peat moss (*Sphagnum riparium*), E
Brush-tipped emerald (*Somatochlora walshii*), E
Bolivar Reservoir – Muskingum Watershed Conservancy District

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. Additional comments on some of the features may be found in pertinent sections below.

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: 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 long-solid (*Fusconaia maculata maculata*), a state endangered mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact this species.

The project is within the range of the Iowa darter (*Etheostoma exile*), a state endangered fish. The DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed, the project is not likely to impact these or other aquatic species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the type of habitat present at the project site and within the vicinity of the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, 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 John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler
ODNR Office of Real Estate
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693
John.Kessler@dnr.state.oh.us



Canton Office
3720 Dressler Road Northwest
Canton, Ohio 44718

T 330.433.2680
F 330.433.2694

September 7, 2017
Project C170352.24

Mr. Dan Everson
United States Fish and Wildlife Service
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230

**American Electric Power
South Canton 765 kV Station Security Project
Request for Technical Assistance Regarding Threatened
and Endangered Species and Critical Habitat
Stark County, Ohio**

Dear Mr. Everson:

GAI Consultants, Inc. (GAI), on behalf of American Electric Power (AEP), is requesting information regarding state- and federally-listed threatened and endangered species in the vicinity of the South Canton 765 kV Station Security Project (Project) in Stark County, Ohio. As part of this request, please provide information specific to any threatened and endangered bats. GAI is also requesting the locations of any known golden or bald eagle nests in the area.

The proposed Project involves the installation of a security fence surrounding the existing South Canton 765 kV Substation. The Project study area is approximately 185 acres.

The study area for the Project is shown on the attached map (Figure 1). The study area consists primarily of the existing substation surrounded maintained transmission line right-of-way and mid-successional hardwood forest. Project shapefiles are included to aid in your review.

GAI and AEP thank you in advance for your assistance. Please contact me at 330.324.9148 or via email at a.wheaton@gaiconsultants.com if you have any questions or require further information.

Sincerely,

GAI Consultants, Inc.

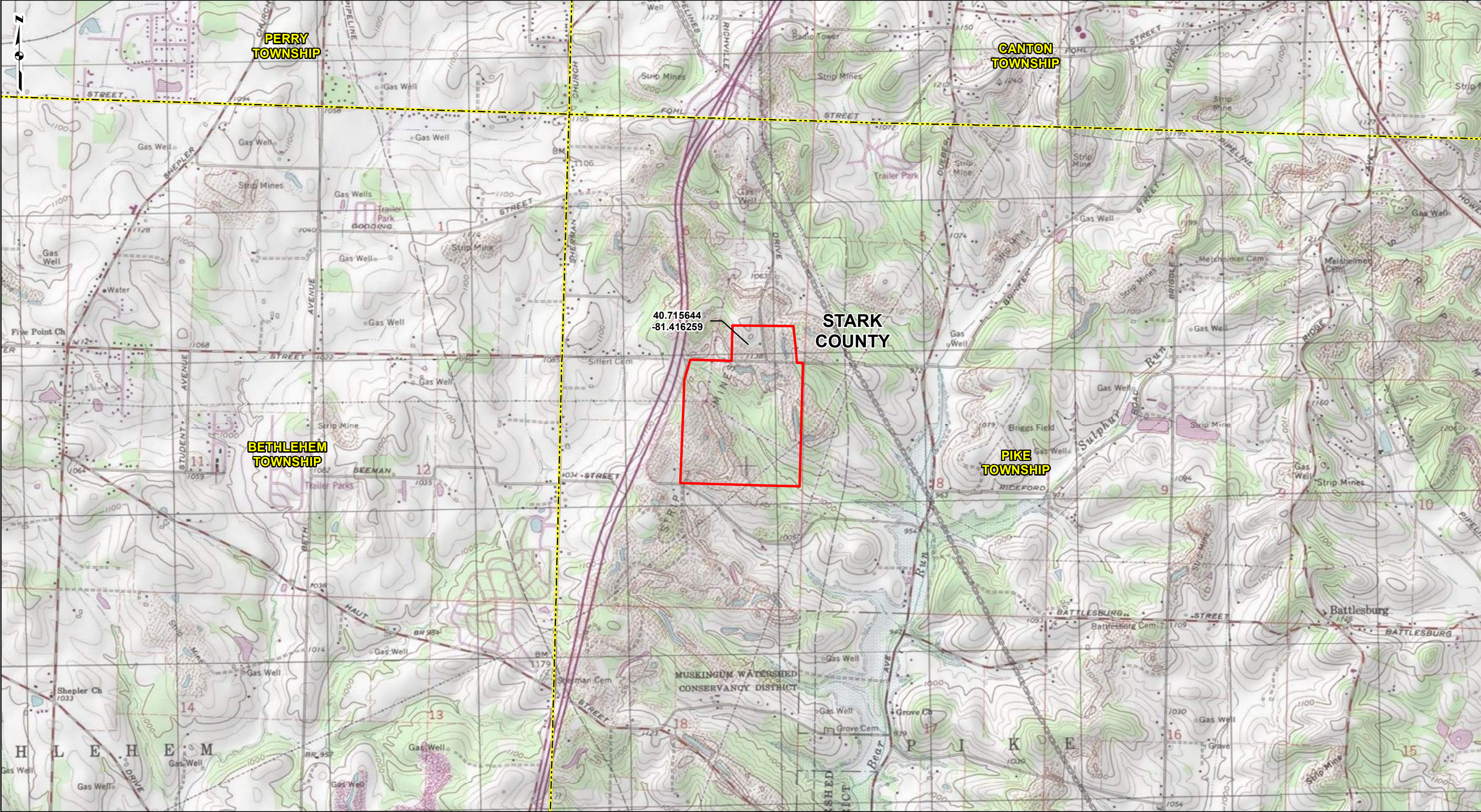
A handwritten signature in blue ink, appearing to read 'Allison R. Wheaton'.

Allison R. Wheaton, WPIT
Senior Project Environmental Specialist

ARW/kea

Attachments: Attachment 1 (Project Location Map)
Project Shapefiles

ATTACHMENT 1
PROJECT LOCATION MAP



PROJECT LOCATION



STARK COUNTY, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: BOLIVAR (1978) AND WAYNESBURG (1978), OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 09/2017.

LEGEND

- STUDY AREA
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY

0 1,000 2,000 4,000 Feet

PROJECT LOCATION MAP



SOUTH CANTON 765 KV
STATION SECURITY PROJECT
AMERICAN ELECTRIC POWER



DRAWN BY: AKW
CHECKED: EFJ

DATE: 9/6/2017
APPROVED: ARW

**LETTER OF NOTIFICATION FOR THE SOUTH CANTON 765KV TRANSMISSION STATION EXPANSION
PROJECT**

Appendix C Agency Coordination Letters



In reply refer to
2017-STA-40506

December 19, 2017

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

RE: South Canton 765kV Station Safety Fence Project, Pike Township, Stark County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on November 28, 2017 regarding the proposed South Canton 765kV Station Safety Fence Project, Pike Township, Stark County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-4). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]).

The following comments pertain to the *Phase I Archaeological Investigations for the Approximately 74.9 ha (185 ac) South Canton 765kV Station Safety Fence Project in Pike Township, Stark County, Ohio* by Weller & Associates, Inc. (2017).

A literature review, visual inspection, and shovel probe excavation was completed as part of the investigations. No previously identified archaeological sites are located within the project area. No archaeological sites were identified during this survey and a large majority of the project area was found to be disturbed from previous mining activity or sloped. Based on the information provided, we agree with your determination of no historic properties affected and no further archaeological work is necessary.

The following comments pertain to the *History/Architecture Investigations for the Approximately 74.9 ha (185 ac) South Canton 765kV Station Safety Fence Project in Pike Township, Stark County, Ohio* by Weller & Associates, Inc. (2017).

The investigations consisted of a systematic survey of all properties fifty years of age or older that are situated within 1,000' of the proposed project site. Two properties were identified within the Area of Potential Effects that may have a direct line-of-sight to the project.

It is Weller's recommendation that neither of the two identified properties are eligible for inclusion in the National Register of Historic Places (NRHP) due to a lack of associative significance, a loss of integrity, or a lack of character defining features. Our office agrees with Weller's recommendations regarding eligibility.

The results of the architectural investigation identified no historic properties located within the APE that exhibit potential significance for inclusion in the National Register of Historic Places. Therefore, we agree that the project as proposed will have no effect on historic properties.

RPR Serial No: 1071402, 1071403

Mr. Ryan J. Weller
Page 2
December 19, 2017

Based on the information provided, we agree the project will not affect historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional historic properties are discovered during implementation of this project. In such a situation, this office should be contacted.

If you have any questions, please contact me at (614) 298-2022, or by e-mail at khorrocks@ohiohistory.org. Thank you for your cooperation.

Sincerely,



Krista Horrocks, Project Reviews Manager
Resource Protection and Review

cc: Ron Howard, AEP (rmhoward@aep.com)

RPR Serial No: 1071402, 1071403

OHIO HISTORY CONNECTION

800 E. 17th Ave., Columbus, OH 43211-2474 • 614.297.2300 • ohiohistory.org

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

5/26/2020 1:18:19 PM

in

Case No(s). 20-1026-EL-BLN

Summary: Notice Letter of Notification Application for the South Canton 765kV Transmission Station Expansion electronically filed by Tanner Wolffram on behalf of Ohio Power Company