

Legal Department

American Electric Power 1 Riverside Plaza Columbus, OH 43215-2373 AEP.com

Ms. Betty McCauley
Director, Administration Department
Secretary to the Commission
Docketing Division
The Public Utilities Commission of Ohio
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

January 22, 2013

RE: Letter of Notification Case No. 13-0171-EL-BLN Trent – Delaware 138kV Line Improvement Project

Dear Ms. McCauley:

In accordance with Rules 4906-5-02 and 4906-11-01, Ohio Administrative Code ("OAC"), AEP Ohio Transmission Company ("AEP Transco") submits this Letter of Notification for expedited approval. A copy of a check in the amount of \$2,000 for the expedited application processing fee will be filed under separate cover. The requested start date of construction is March 4, 2013, and is scheduled to be completed by November 1, 2013.

As required by Rule 4906-11-01(D)(4), AEP Transco has submitted a copy of this Letter of Notification to the chief executive officer of each municipal corporation and county and the head of each public agency charged with protecting the environment or of planning land use in the area in which the proposed project will be located. Attached to the Letter of Notification are copies of cover letters that have been submitted to the Delaware County Commissioners, Berkshire Township Trustees, Berlin Township Trustees, Delaware Township Trustees, and the Trenton Township Trustees.

Should you have any questions, please do not hesitate to contact me.

Respectfully submitted,

/s/ Yazen Alami Yazen Alami

Attachments

Yazen Alami Regulatory Services (614) 716-2920 (P) (614) 716-2950 (F) yalami@aep.com

### Letter of Notification

for the

### Trent – Delaware 138kV Line Improvement Project

Submitted by

American Electric Power Ohio Transmission Company

To

The State of Ohio Power Siting Board January 2013

#### **LETTER OF NOTIFICATION**

In accordance with Ohio Administrative Code Section 4906-11-01, <u>Letter of Notification</u> requirements, AEP Ohio Transmission Company ("AEP Transco") submits the following.

#### 4906-11-01 (A) General Information

#### 4906-11-01 (B)(1) Project Name and Reference Number

The name of this project is the Trent – Delaware 138kV Line Improvement Project.

#### 4906-11-01 (B)(1) Description of this Project

This project involves replacing existing structures 36, 37, 38 and 61, which are currently double circuit lattice steel towers, with tubular steel double circuit structures. A second conductor circuit and optical ground wire will be installed on the existing transmission line structures and the new structures.

#### 4906-11-01 (B)(1) Reasons this Project Meets the Letter of Notification Requirements

This project meets the requirements for a Letter of Notification because the extent of this project is defined by Item (4)(a) of Appendix A "Application Requirement Matrix for Electric Power Transmission Lines" of Section 4906-1-01 of the Ohio Administrative Code. This project consists of replacing electric power transmission line structures with a different type of structure within an existing electric power transmission line, and two miles or less of new right-of-way are required.

#### 4906-11-01 (B)(2) Need for this Project

The purpose of the Trent - Delaware 138kV Line Improvement project is to install a second conductor circuit to the existing transmission structures to improve and maintain the quality of electric service and reliability to the Central Ohio area, including AEP's load area. This area includes, but is not limited to the communities of Delaware, Sunbury, Galena, Columbus, Dublin, Upper Arlington, Grandview Heights, Hilliard, Grove City, Gahanna, Westerville, New Albany, Pickerington, and others. This project is a critical component of a much larger project, which is the Vassell Substation Project: OPSB Case Number: 11-1313-EL-BSB.

#### 4906-11-01 (B)(3) Project Location Relative to Existing or Proposed Lines

The location of this project is shown on Map 1 and Map 2.

American Electric Power Letter of Notification Trent – Delaware 138kV Line

#### 4906-11-01 (B)(4) Alternatives Considered

No alternative locations were considered. The Trent – Delaware 138kV Line is an existing AEP transmission facility.

#### 4906-11-01 (B)(5) Anticipated Construction Schedule

Construction of this section of the Trent – Delaware 138kV Line is expected to begin March 4, 2013. This project is scheduled to be completed November 1, 2013.

#### 4906-11-01 (B)(6) Maps Depicting Project Location

Map 1 has been prepared to show the project location in relation to other transmission lines in the area. To view this project, take Interstate 71 to exit 131 for US-36/OH-37 toward Delaware/Sunbury. Turn right onto OH-37 E/State Route 37E/US-36E. Turn left onto US-36E. Turn left onto North Old 3C Road. Turn Left onto Centerburg Road. This road will lead to AEP's Trent Substation where the project begins. Map 2 has been prepared to show the project location in relation to the new Vassell Substation (OPSB Case No. 11-1313-EL-BSB).

#### 4906-11-01 (B)(7) Property Easements

The existing line has existing easements that were obtained by American Electric Power. All new structures will be located within the existing transmission line right-of-way. The property owners have been notified and are aware of the transmission line structure replacements. All property owners along the existing transmission line have been notified of the installation of the second conductor circuit and optical ground wire to the existing lattice towers.

#### 4906-11-01 (C) Technical Features

#### 4906-11-01 (C)(1) Description of Technical Features

The proposed transmission line structure replacements will be designed for 138kV. Figure 1 depicts the typical proposed tangent single pole structure to be installed. Figure 2 depicts the typical proposed dead end 2-pole structure to be installed.

#### 4906-11-01 (C)(1) Number and Type of Structures

The transmission line work will include installing two (2) self-supporting 2-pole dead end structures and two (2) self-supporting single pole davit arm structures. New insulators and hardware will be installed on the new structures, and the existing conductor will be transferred. Construction will also include the installation of a new conductor circuit on the existing tower line's vacant arms as well as optical ground wire.

American Electric Power Letter of Notification Trent – Delaware 138kV Line

#### 4906-11-01 (C)(1) Right-of-Way and Land Requirements

The new structures will be constructed on existing right-of-way. No new right-of-way will be required for this project. No additional land rights will be required.

#### 4906-11-01 (C)(2)(a) Calculated Electric and Magnetic Field Levels

**Electric and Magnetic Fields During Operation** 

(a) Calculated Electric and Magnetic Field Levels

Three loading conditions were examined: (1) normal maximum loading, (2) emergency line loading, and (3) winter normal conductor rating. Normal maximum loading represents the peak flow expected with all system facilities in service; daily/hourly flows fluctuate below this level. Emergency loading is the maximum current flow during unusual (contingency) conditions, which exist only for short periods of time. Winter normal (WN) conductor rating represents the maximum current flow that a line, including its terminal equipment, can carry during winter conditions. It is not anticipated that this line would operate at its WN rating in the foreseeable future.

#### Line Loading and Rating

Circuit	Normal Maximum Loading	Emergency Loading	Winter Normal Conductor Rating
Delaware – Vassell 138kV	669 A	805 A	1786 A
Delaware – Trent 138kV	125 A	163 A	1786 A

The electric and magnetic field levels for the proposed project were calculated for the conductor configuration as depicted by "Figure 1" (See Appendix).

#### **Electric and Magnetic Field (EMF) Strength**

Condition	Ckt.1/Ckt.2 Load (A)*	Field (kV/m)**	Magnetic Field (mG)**
(1) Normal Max. Loading (2) Emergency Line Loading (3) WN Conductor Rating	669/125 805/163 1786/1786	0.2/ 0.9/0.2 0.2/ 0.9/0.2 0.2/ 2.8/0.2	32/ 66/ 14 38/ 80/ 16 77/526/ 75
IEEE Std C95.6-2002 Limits		5.0/10.0/5.0	9040/***/9040

- \*Current flows in Circuit 1 (Delaware-Vassell) and Circuit 2 (Delaware-Trent) are in the same direction.
- \*\*EMF levels (left ROW edge/maximum/right ROW edge) calculated one meter above ground at the point of minimum ground clearance, assuming balanced phase currents and nominal voltages. ROW width is 100 feet.
- \*\*\*Maximum permissible level in a "controlled environment" is 27,100 mG.

#### 4906-11-01 (C)(2)(b) Discussion of Design Alternatives

Double circuit davit arm, single steel pole structures and two-pole steel pole dead end structures were selected to minimize the affected area on private properties. Installing single pole structures and 2-pole dead end structures reduces the affected area significantly when compared to the affected area of the existing towers.

#### 4906-11-01 (C)(3) Estimated Capital Costs

The 2013 capital cost estimates for the proposed project have been tabulated by the Federal Energy Regulatory Commission (FERC) Electric Plant Transmission Accounts:

FERC Accounts	Estimated Capital Costs
355 Poles and Fixtures	\$1,437,124
356 Overhead Conductors and Devices	\$3,686,444
Total Cost	\$5,123,568

#### 4906-11-01 (D) Socioeconomic Data

#### 4906-11-01 (D)(1) Land Use and Population Density

This transmission line project is located in Trenton Township, Berkshire Township, Berlin Township, and Delaware Township of Delaware County. The installation of tubular steel poles at certain locations will result in a smaller footprint than the existing lattice steel towers. This will result in less of an impact to the existing land use. URS, an independent environmental consultant, has prepared a detailed land use description and population density. The URS report is provided in the Appendix.

#### 4906-11-01 (D)(2) Location and Description of Existing Agricultural Districts

URS performed a study to determine if any Agricultural District Land parcels were located within the study corridor. Twelve Agricultural District Land parcels were identified within the 2,000 foot study corridor. The URS report is provided in the Appendix.

#### 4906-11-01 (D)(3) Archaeological and Cultural Resources

A Phase I Archaeological Investigation was conducted by Weller & Associates. A copy of this report will be provided to the Ohio Power Siting Board under separate cover.

#### 4906-11-01 (D)(4) Local Officials to be Notified

Copies of this Letter of Notification have been sent to the Delaware County
Commissioners, the Township Trustees for each of the four townships, and the
Delaware County Public Library. Copies of the cover letters to these officials and the
local library are attached in the Appendix.

#### 4906-11-01 (D)(4) Public Information Program

All existing property owners have been notified. There are no adjacent property owners that will be affected by the structure replacement or conductor installation. A copy of the LON has been placed on AEP Ohio's website, as well as a copy sent to the library in the vicinity of the project.

#### 4906-11-01 (D)(5) Pending Litigation

There are no litigation involving this project and none is expected.

#### 4906-11-01 (D)(6) Local, State, and Federal Requirements

These structures will be designed and constructed to meet or exceed the requirements of the National Electric Safety Code, AEP design standards, and all applicable OSHA standards.

#### 4906-11-01 (E) Environmental

#### 4906-11-01 (E)(1) Endangered or Threatened Species

AEP retained URS to conduct a threatened and endangered species review within the counties crossed by the project centerline, and field survey within the existing maintained right-of-way (approximately 50 feet on each side of the project centerline) for the entire length of the project. The field survey was conducted by URS from December 17, 2012 through December 21, 2012. Based on the nature of the project, review of available current literature, review of federal and state records of species of concern, contact with the USFWS and the ODNR, and the field survey conducted in December 2012, it is not expected that federal or state species of concern will be impacted by the project as currently planned. URS has prepared a detailed threatened and endangered species survey report, which is located in the Appendix.

#### 4906-11-01 (E)(2) Areas of Ecological Concern

American Electric Power Letter of Notification Trent – Delaware 138kV Line No national forests or parks designated or proposed wilderness areas, National Wild and Scenic Rivers, wildlife areas, wildlife refuges, wildlife management areas, or wildlife sanctuaries were identified within 1,000 feet of the proposed Project. Alum Creek State Park, the Olentangy River Ohio Scenic River, and the Jones/Logan Olentangy Scenic River easement are crossed by the Project corridor. Based on the nature of the construction within existing maintained right-of way, no or minimal temporary impacts to these areas are anticipated.

The proposed new circuit will cross multiple 100-year flood zone areas including in the vicinities of Big Walnut Creek, Little Walnut Creek, Alum Creek Reservoir, and the Olentangy River. Based on 2009 floodplain GIS data obtained from Delaware County, none of the proposed replacement pole locations are located within 100-year flood zones. No changes in flood elevations are anticipated as a result of the Project.

During the field survey, a total of 36 wetlands were identified within the survey corridor. The 36 wetlands totaled 9.4 acres within the survey area. These wetlands are of five wetland habitat types: 28 PEM wetlands, four PEM/PSS wetlands, two PSS wetlands, one PSS/PEM wetland, and one POW/PEM wetland. Twenty-five of the 36 wetlands were classified as Category 1 wetlands, and the remaining 11 wetlands were classified as Category 2 wetlands. Wetlands will be avoided where possible. Where avoidance is not possible, wetlands will be matted with timber matting which will prevent impacts to the wetland.

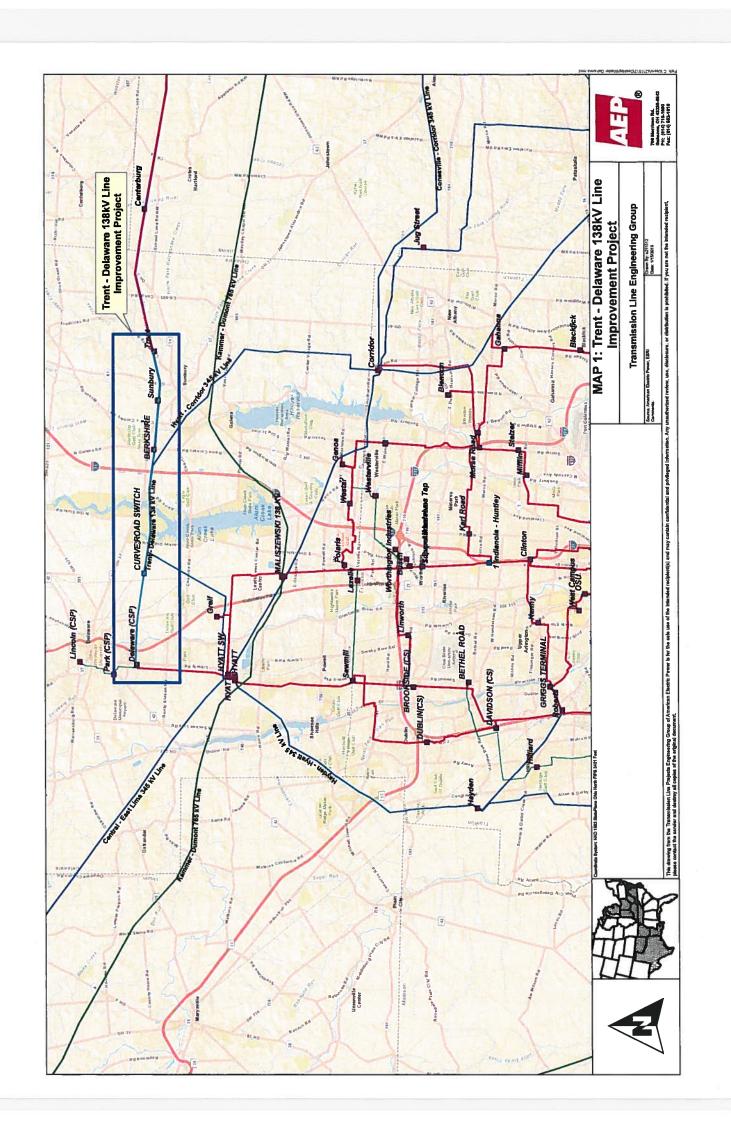
Within the survey corridor, 36 streams, totaling 9,532 feet, were assessed: 12 ephemeral, 20 intermittent, and 4 perennial water bodies.

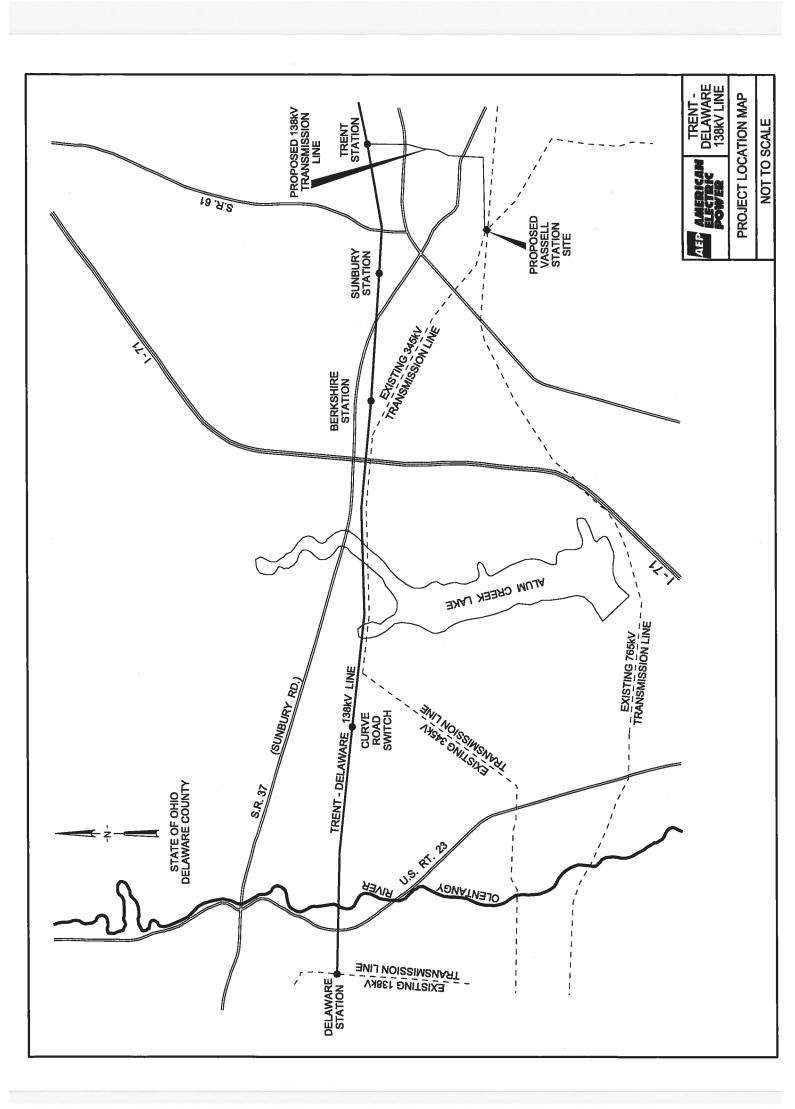
Two ponds, totaling 1.45 acres, were identified within the Project survey corridor. The two ponds appear to be man-made for recreational use or storm water retention.

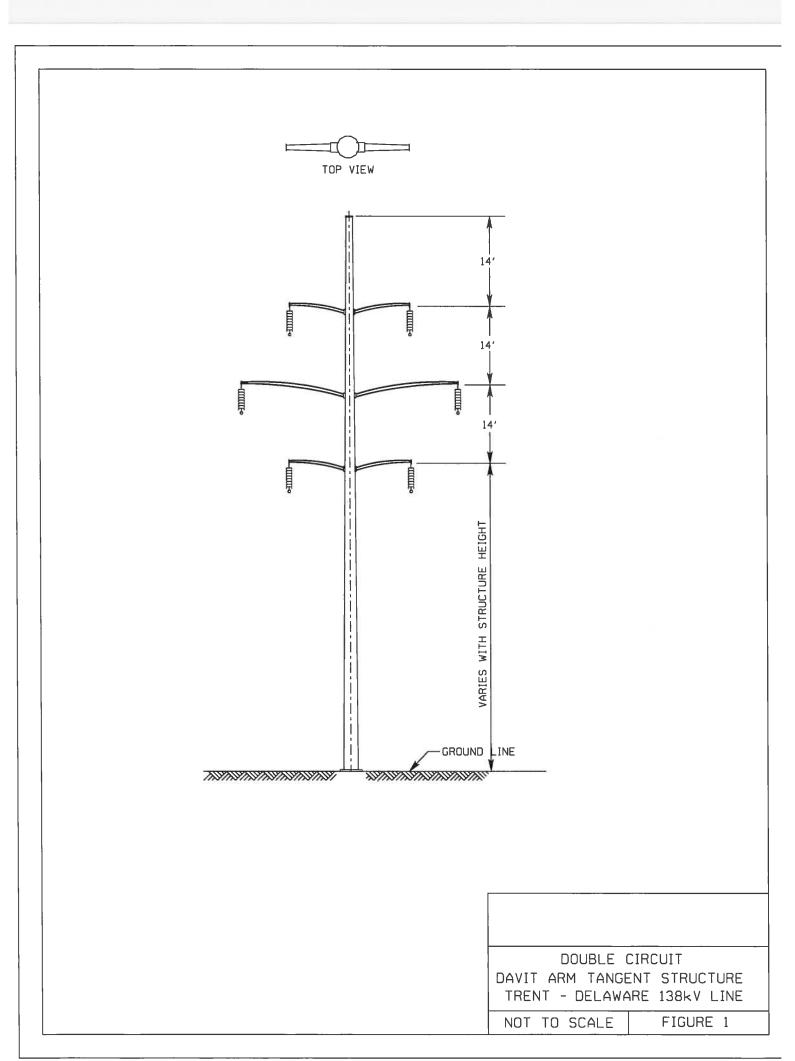
URS has prepared an Areas of Ecological Concern report, which is located in the Appendix.

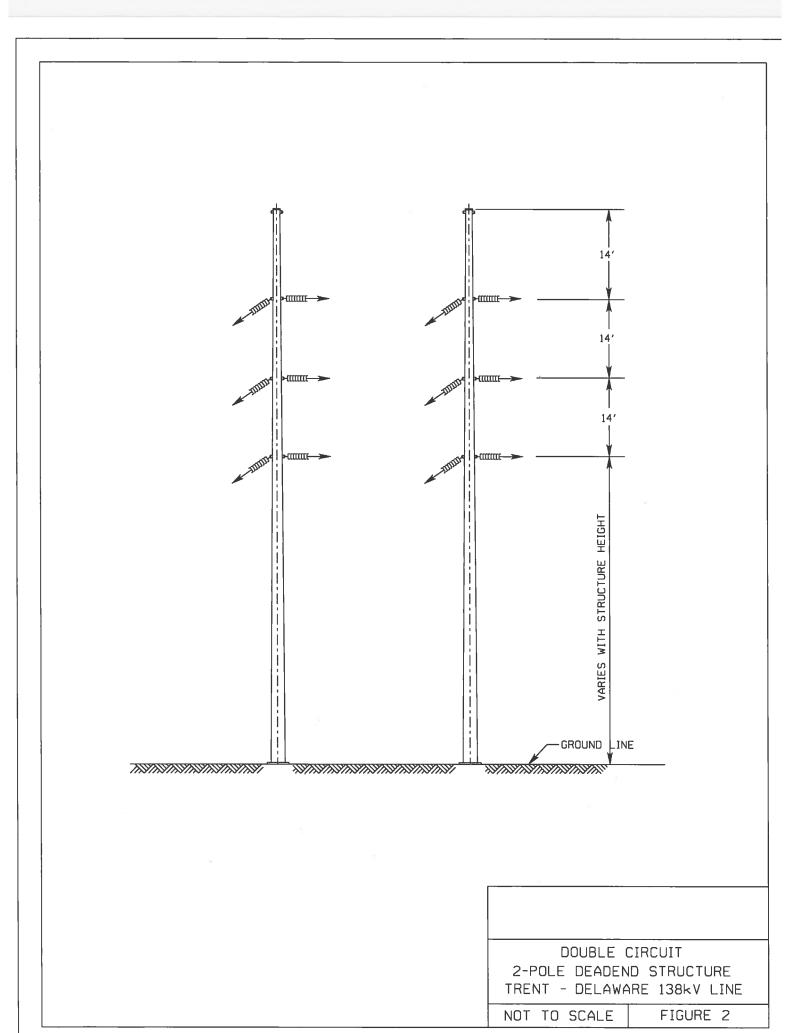
#### 4906-11-01 (E)(3) Additional Information

There are no unusual conditions that will result in significant environmental or social impacts from the conductor stringing and replacement of these proposed 138kV transmission line structures. A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction stormwater discharges under General Permit OHC000003. The Stormwater Pollution Prevention Plan (SWPPP), which will include the Access Plan, will be provided to the OPSB upon completion of final access road design.











January 14, 2013

Delaware County Commissioners Ken O'Brien Dennis Stapleton Tommy Thompson 101 North Sandusky Street Delaware, Ohio 43015

# Letter of Notification Trent – Delaware 138kV Line Improvement Project

#### Dear Commissioners:

In accordance with Chapter 4906 of the Ohio Administrative Code, the Columbus Southern Power Company is required to submit a Letter of Notification to the State of Ohio Power Siting Board whenever certain changes are made to our transmission facilities.

AEP Transco will be installing a second conductor circuit and optical ground wire to the existing transmission line and new structures. AEP Ohio is planning to replace 4 structures to accommodate a second circuit in Berkshire Township, Delaware County, Ohio. AEP Transco will be installing a second conductor circuit and optical ground wire to the existing transmission line and new structures.

In compliance with Rule 4906-11-02 of the OPSB Rules and Regulations, we have prepared and filed the attached Letter of Notification. This Notice contains details on the line location, project description and construction schedule, and is submitted for your information.

Cordially,

Elizabeth Decima

Transmission Line Engineering

Elizabeth Decimo



January 13, 2013

Berkshire Township Trustees Bill Holtry Robert Carpenter Rod Myers Melody George 1454 Rome Corners Road Galena, OH 43021

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January 13, 2013

Berlin Township Trustees Tom D'Amico Phillip Panzarella Ron Bullard 3271 Cheshire Road Delaware, OH 43015

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Elizabeth Decima

Transmission Line Engineering

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January 13, 2013

Delaware Township Trustees Steven Jefferis Roger VanSickle M. John Main 2590 Liberty Road Delaware, OH 43015

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Transmission Line Engineering

Elizabeth Decimo



January 13, 2013

Trenton Township Trustees Mark Almendinger Richard Fisher Kevin Justice 15495 Hartford Road Sunbury, OH 43074

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**Appendix** 

### TRENT-DELAWARE SECOND 138 KV CIRCUIT PROJECT

# AREAS OF ECOLOGICAL CONCERN, WETLAND DETERMINATION, AND STREAM ASSESSMENT REPORT

#### Prepared for:

American Electric Power Service Corporation 700 Morrison Road Gahanna, Ohio 45230



Prepared by:

### **URS**

525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Project #: 14951002

January 2013





#### **TABLE OF CONTENTS**

4.0	DD0 !!	ECT DECORIDATION	
1.0		ECT DESCRIPTION	
2.0	METH		1
	2.1	Special Status Ecological Areas	
	2.2	Wetland Assessment	
	2.3	Stream and River Crossings	4
3.0	RESU	JLTS	5
	3.1	Special Status Ecological Areas	5
	3.2	Wetland Assessment	5
	3.3	Stream and River Crossings	10
4.0	POND	DS	
5.0			
6.0	CONC	MARYCLUSION	12
		TABLES	
Num	ber		
TABLI TABLI		WETLANDS IDENTIFIED WITHIN THE SURVEY CORRIDOR SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE SURVEY	6
		CORRIDOR	7

### FIGURES (follow text)

STREAMS IDENTIFIED WITHIN THE SURVEY CORRIDOR......10

#### Number

TABLE 3

FIGURE 1 PROJECT OVERVIEW ECOLOGICAL SURVEY RESULTS

APPENDICES (follow figures)

#### Number

APPENDIX A ORAM FORMS
APPENDIX B PHOTOGRAPHS





#### 1.0 PROJECT DESCRIPTION

This document presents the results of the wetland and stream assessment conducted by URS Corporation (URS) for the American Electric Power's (AEP) proposed Trent-Delaware 138 kV Line Improvement Project (Project). AEP is proposing to string a second 138 kV circuit predominantly on the open side of structures along the existing Trent-Delaware 138 kV transmission line. The open side is sufficient for 60 of 64 existing structures. It is necessary to replace the remaining four structures with new double-circuit steel poles. Two of the structure replacements will be approximately 200 to 400 feet west of their current locations. The entire Project is proposed within existing right-of-way that includes the single circuit Trent-Delaware line as well as portions of the Hyatt-Corridor and Hyatt-Conesville 345 kV circuits. The Project extends for approximately 13.5 miles in Delaware County, Ohio, as shown on Figure 1.

As part of the Ohio Power Siting Board (OPSB) Letter of Notification (LON) requirements, AEP is required to describe the investigation concerning the presence or absence of areas of ecological concern as stated in Ohio Administrative Code (OAC) Rule 4906-15-11-01(E)(2). This rule states:

- (E) Environmental data. Describe the environmental impacts of the proposed project. This description shall include the following information:
  - (2) 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 areas likely to be disturbed by the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

AEP retained URS to review areas of ecological concern, as defined above, within the proposed Project vicinity and conduct a field survey of wetlands and streams within the existing maintained right-of-way (ranging from approximately 100 to 200 feet wide). This report will be used to assist AEP's efforts to avoid impacts to areas of ecological concern present in the study area during construction activities.

#### 2.0 METHODS

#### 2.1 Special Status Ecological Areas

URS reviewed desktop maps and GIS data in order to identify national and state forests and parks, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries in the Project vicinity. GIS data sources included the ODNR Biodiversity Database and federal land and parks layers available from Environmental Systems Research Institute (ESRI). Property ownership within 1,000 feet of the Project was reviewed to identify parcels that may have special status. URS also noted land use during the field reconnaissance conducted from December 17, 2012 through December 21, 2012.





Floodplains were evaluated based on the Federal Emergency Management Agency's (FEMA) Flood Map Viewer (https://hazards.fema.gov/wps/portal/mapviewer).

#### 2.2 Wetland Assessment

The proposed Project construction activities include open side stringing and limited rebuild of four existing structures within existing right-of-way. Since construction impacts are expected to be minimal, URS restricted the wetland assessments to: 1) rapidly identifying wetlands, particularly to Cowardin classification and approximate boundaries, and 2) evaluations using the Ohio Rapid Assessment Method (ORAM) protocol. The Project area was reviewed for the presence of wetlands using the procedures outlined in the United States Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987 Manual) (Environmental Laboratory, 1987) in conjunction with the procedures outlined in the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Regional Supplement)(2010). Since the Project survey only included a wetland determination, URS did not conduct detailed examinations of the three wetland parameters that are documented in USACE Regional Supplement data sheets. However, enough information was gathered to make the determination whether a wetland was present or not based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology.

Recent USACE guidance indicates that to the extent possible, the hydrophytic vegetation decision should be based on the plant community that is normally present during the wet portion of the growing season in a normal rainfall year (USACE, 2009). Vegetation sampling for a wetland determination can be challenging when some plants are covered by snow or die back due to freezing temperatures or other factors (USACE, 2009). The end of the growing season is indicated when woody deciduous species lose their leaves or the last herbaceous plants cease flowering and their leaves become dry or brown, whichever occurs last. The wetland delineation field work along the Project survey corridor was conducted after the occurrence of these events and therefore, outside the normal growing season. Conducting a wetland determination outside the normal growing season can make identifying the wetland/upland boundary more challenging and may require further assessment during the next growing season.

URS biologists identified wetlands through a pedestrian site reconnaissance of the existing right-of-way, including identifying the vegetation communities, soils identification where necessary, conducting a geomorphologic assessment of hydrology, and notation of disturbance. Determined wetland boundaries were noted where one or more of these criteria gave way to upland characteristics. The determined wetland boundaries were recorded with a handheld Trimble GeoXH GPS unit where the proposed Project enters and exits a wetland.

At the time of the field surveys, approximately 0.25-mile of the Project survey corridor was inaccessible due to severe flooding and a subsequent snow fall event that produced three to four inches of snow. The inaccessible area was located near the confluence of Little Walnut Creek and several intermittent streams. Like other areas of the project, the inaccessible area is existing maintained right-of-way. This inaccessible area is located within the 100-year floodplain of Little Walnut Creek. No structure





replacements are proposed within this area, although access to one existing structure appears to be necessary.

The field survey results presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which URS is unaware and has not had the opportunity to review. Changes in the condition of a property may occur with time due to natural processes or human impacts at the project site or on adjacent properties. Changes in applicable standards may also occur as a result of legislation or the expansion of knowledge over time. Accordingly, the findings of this report may become invalidated, wholly or in part, by changes beyond the control of URS.

<u>Wetland Classifications:</u> Wetlands were classified based on the naming convention found in Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al, 1979). All identified wetlands within the survey corridor were classified as freshwater, Palustrine Systems, which includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens. Three Palustrine wetland classes were identified within the Project survey corridor. The wetland classes were as follows:

**PEM** – Emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.

**PSS** – Scrub/shrub wetlands are characterized by woody vegetation that is less than 3 inches diameter at breast height (DBH), and greater than 3.28 feet tall. The woody angiosperms (i.e. small trees or shrubs) in this broad leaved deciduous community have relatively wide, flat leaves that are shed annually during the cold or dry season.

**POW** – Palustrine open water communities generally have water depths of less than 6.6 feet (2 meters) and remain permanently inundated.

Ohio Rapid Assessment Method v. 5.0: The Ohio Environmental Protection Agency (Ohio EPA) ORAM for Wetlands v 5.0 was developed to determine the relative ecological quality and level of disturbance of a particular wetland in order to meet requirements under Section 401 of the Clean Water Act. Wetlands are scored on the basis of hydrology, upland buffer, habitat alteration, special wetland communities, and vegetation communities. Each of these subject areas is further divided into subcategories under ORAM v5.0 resulting in a score that describes the wetland using a range from 0 (low quality and high disturbance) to 100 (high quality and low disturbance). Wetlands scored from 0 to 29.9 are grouped into "Category 1", 30 to 59.9 are "Category 2" and 60 to 100 are "Category 3". Transitional zones exist between "Categories 1 and 2" from 30 to 34.9 and between "Categories 2 and 3" from 60 to 64.9. However, according to the Ohio EPA, if the wetland score falls into the transitional range, it must be given the higher Category unless scientific data can prove it should be in a lower Category (Mack, 2001). The ORAM scores for the wetlands that were delineated are discussed in Section 3.2 of this report. The three





categories of wetlands defined by the individual wetland ORAM scores are defined in the following paragraphs:

Category 1 Wetlands – Category 1 wetlands support minimal wildlife habitat, hydrological and recreational functions, and do not provide for or contain critical habitats for threatened or endangered species. In addition, Category 1 wetlands are often hydrologically isolated and have some or all of the following characteristics: low species diversity, no significant habitat or wildlife use, limited potential to achieve wetland functions, and/or a predominance of non-native species. These limited quality wetlands are considered to be a resource that has been severely degraded or has a limited potential for restoration, or is of low ecological functionality.

Category 2 Wetlands – Category 2 wetlands "...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." Category 2 wetlands constitute the broad middle category of "good" quality wetlands, and can be considered a functioning, diverse, healthy water resource that has ecological integrity and human value. Some Category 2 wetlands are lacking in human disturbance and considered to be naturally of moderate quality; others may have been Category 3 wetlands in the past, but have been degraded to Category 2 status.

Category 3 Wetlands – Wetlands that are assigned to Category 3 have "...superior habitat, or superior hydrological or recreational functions." They are typified by high levels of diversity, a high proportion of native species, and/or high functional values. Category 3 wetlands include wetlands which contain or provide habitat for threatened or endangered species, are high quality mature forested wetlands, vernal pools, bogs, fens, or which are scarce regionally and/or statewide. It is important to stress that a wetland may be a Category 3 wetland because it exhibits one or all of the above characteristics. For example, a forested wetland located in the flood plain of a river may exhibit "superior" hydrologic functions (e.g. flood retention, nutrient removal), but not contain mature trees or high levels of plant species diversity.

#### 2.3 Stream and River Crossings

Regulatory activities under the Clean Water Act provide authority for states to issue water quality standards and "designated uses" to all "Waters of the U.S." upstream to the highest reaches of the tributary streams. In addition, the Federal Water Pollution Control Act (FWPCA) of 1972 and its 1977 and 1987 amendments require knowledge of the potential fish or biological communities that can be supported in a stream or river, including upstream headwaters. Streams were identified by the presence of a defined bed and bank, and evidence of an ordinary high water mark (OHWM). Similar to the wetland assessments, URS stream assessments were limited to GPS recording of channels and basic classification based on flow regime (perennial, intermittent, or ephemeral).





#### 3.0 RESULTS

#### 3.1 Special Status Ecological Areas

URS conducted a review of published resources and agency consultations to identify national or state forests and parks designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, wildlife sanctuaries and floodplains crossed by and in the immediate vicinity of the Project. No national forests or parks designated or proposed wilderness areas, national wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, or wildlife sanctuaries were identified within 1,000 feet of the proposed Project.

Alum Creek State Park is crossed by the Project corridor. Preliminary locations of three of the four proposed structure replacements are within Alum Creek State Park between Dunham Road and Lackey Old State Road. It is expected that access to the existing and proposed structure locations will be obtained along the existing right-of-way in this area, although full design and engineering of the access roads is pending. No in-water work within Alum Creek Reservoir is planned at this time. Due to the nature of the construction with an existing right-of-way, temporary impacts to Alum Creek State Park are expected to be minimal.

The portion of the Olentangy River designated as an Ohio Scenic River and the Jones/Logan Olentangy scenic river easement will be spanned by the new circuit utilizing existing structures. No structures are located within the scenic river easement and it is not expected to be necessary for major equipment to cross the easement or Olentangy River due to the use of cable messenger stringing methods. Based on the nature of the construction within existing maintained right-of way, no or minimal temporary impacts to these areas are anticipated.

The proposed new circuit will cross multiple 100-year flood zone areas including in the vicinities of Big Walnut Creek, Little Walnut Creek, Alum Creek Reservoir, and the Olentangy River. Based on 2009 floodplain GIS data obtained from Delaware County, none of the proposed replacement pole locations are located within 100-year flood zones. No changes in flood elevations are anticipated as a result of the Project.

#### 3.2 Wetland Assessment

A total of 36 wetlands (9.4 acres) were identified within the Project survey corridor. URS considers all 36 wetlands to be jurisdictional (i.e., "Waters of the U.S."). The 36 wetlands were of five wetland habitat types: 28 palustrine emergent (PEM) wetlands, four palustrine emergent/palustrine scrub-shrub (PEM/PSS) wetlands, two palustrine scrub-shrub (PSS) wetlands, one palustrine scrub-shrub/palustrine emergent (PSS/PEM) wetland, and one palustrine open water/palustrine emergent (POW/PEM) wetland. Wetlands identified within the Project survey corridor are summarized in Table 1. Based on ORAM v. 5.0 methodologies, 25 of the 36 wetlands within the Project survey corridor are Category 1 wetlands, and the remaining 11 wetlands are Category 2 wetlands. No Category 3 wetlands were identified in the Project survey corridor. Wetland 6 had the lowest ORAM score, 14.5, and Wetland 34 had the highest score, 53.5.





Category 1 Wetlands – The 25 Category 1 wetlands delineated within the Project survey corridor were identified as the following habitat types: 22 PEM wetlands, two PSS wetlands, and 1 POW/PEM wetland. The highest scoring Category 1 wetland was 29.5 (Wetland 32), and the lowest was 14.5 (Wetland 6). These wetlands typically exhibited narrow upland buffers and intensive use of surrounding upland areas (row cropping, residential, commercial, or existing rights-of-way), exhibited limited plant community development with a moderate to high percentage of invasive species, and characteristically had habitat and hydrology in the early stages of successional development, recovering from previous manipulation because of farming, ROW maintenance, or other disturbances.

Category 2 Wetlands – The 11 Category 2 wetlands delineated within the Project survey corridor were identified as the following habitat types: six PEM wetlands, four PEM/PSS wetlands, and one PSS/PEM wetland. The highest scoring Category 2 wetland was 53.5 (Wetland 34), and the lowest was 30 (Wetland 35). These wetlands exhibited a fair to moderately-high quality plant community, low to high intensity surrounding land use (row cropping, residential, existing rights-of-way, or wooded), and had recovered or were recovering from modification to substrate and habitat.

Category 3 Wetlands - No Category 3 wetlands were identified in the Project survey corridor.

The locations and approximate extents of the wetlands identified within the survey corridor are shown on Figures 2A through 2K. Completed ORAM forms are provided in Appendix A. Color photographs were taken of each wetland during the field survey and representative photos are provided in Appendix B.

TABLE 1

DELINEATED WETLANDS WITHIN THE

TRENT-DELAWARE SECOND 138 kV CIRCUIT ECOLOGY SURVEY CORRIDOR

Report Name	Cowardin Wetiand Type <sup>a</sup>	ORAM Score	ORAM Category	Acreage within Survey Corridor	Approximate Length Crossed by Transmission Line (feet) <sup>b</sup>
Wetland 01	PEM	24.5	Category 1	0.09	NC
Wetland 02	PEM	19.5	Category 1	0.07	NC
Wetland 03	PEM	39	Category 2	0.75	177
Wetland 04	PEM	39	Category 2	0.24	8
Wetland 05	PEM	16.5	Category 1	0.12	56
Wetland 06	PEM	14.5	Category 1	0.14	74
Wetland 07	PEM	24.5	Category 1	0.46	115
Wetland 08	PEM	28.5	Category 1	1.04	263
Wetland 09	PEM	35	Category 2	0.48	126
Wetland 10	PEM	18.5	Category 1	0.25	172
Wetland 11	PEM	18.5	Category 1	0.09	NC
Wetland 12	PEM/PSS	41.5	Category 2	0.11	28
Wetland 13	PEM/PSS	34.5	Category 2	0.40	148
Wetland 14	PEM	21.5	Category 1	0.78	149
Wetland 15	PEM	21.5	Category 1	0.85	105
Wetland 16	PSS	20	Category 1	0.05	24
Wetland 17	PEM	17	Category 1	0.01	NC





TABLE 1

DELINEATED WETLANDS WITHIN THE
TRENT-DELAWARE SECOND 138 kV CIRCUIT ECOLOGY SURVEY CORRIDOR

Report Name	Cowardin Wetland Type <sup>a</sup>	ORAM Score	ORAM Category	Acreage within Survey Corridor	Approximate Length Crossed by Transmission Line (feet) <sup>b</sup>
Wetland 18	PEM	28.5	Category 1	0.10	NC
Wetland 19	PEM	24	Category 1	0.32	166
Wetland 20	PEM	32.5	Category 2	0.07	7
Wetland 21	PEM	28.5	Category 1	0.11	NC
Wetland 22	PEM	26.5	Category 1	0.24	NC
Wetland 23	PEM	34.5	Category 2	0.01	30
Wetland 24	POW/PEM	25	Category 1	0.54	130
Wetland 25	PEM	19.5	Category 1	0.05	NC
Wetland 26	PEM	26.5	Category 1	0.21	NC
Wetland 27	PEM	34.5	Category 2	0.37	154
Wetland 28	PEM/PSS	33.5	Category 2	0.72	221
Wetland 29	PEM	24.5	Category 1	0.08	NC
Wetland 30	PSS	27	Category 1	0.01	6
Wetland 31	PEM	24.5	Category 1	0.07	25
Wetland 32	PEM	29.5	Category 1	0.07	49
Wetland 33	PEM	23	Category 1	0.36	189
Wetland 34	PEM/PSS	53.5	Category 2	0.05	22
Wetland 35	PSS/PEM	30	Category 2	0.04	NC
Wetland 36	PEM	25.5	Category 1	0.06	37
Total: 3	6 Wetlands			9.40	2,481

Wetlands listed from East to West

Cowardin Wetland Type<sup>a</sup>: PEM- Palustrine emergent, PSS- Palustrine scrub-shrub, POW- Palustrine open water Linear Feet Crossed by Centerline (feet)<sup>b</sup>: NC = Not Crossed by centerline

<u>Preliminary Soils Evaluation:</u> According to the Web Soil Survey for Delaware County, Ohio (USDA, 2012) and the Natural Resources Conservation Services Hydric Soils List of Ohio, 24 soil map units from 13 soil series are mapped within the survey corridor. Fourteen of these soil map units are considered hydric soils or contain hydric soil inclusions (USDA, 2011). Soil series located within the Project area are shown on Figures 2A through 2K. Table 2 provides a list of these soil map units along with their basic attributes.

TABLE 2
SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE SURVEY CORRIDOR

Soll Series	Symbol	Map Unit Description	Percent of Survey Corridor by Series	Topographic Setting	Hydric	Hydric Component (%)
Amanda	AmD2	Amanda silt loam, 12 to 18 percent slopes, eroded	1.0	End moraines, ground moraines	no	n/a
	AmF	Amanda silt loam, 25 to 50 percent slopes	0.2	End moraines, ground moraines	no	n/a





TABLE 2
SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE SURVEY CORRIDOR

Soil Series	Symbol	Map Unit Description	Percent of Survey Corridor by Series	Topographic Setting	Hydric	Hydric Component (%)
Bennington	BeA	Bennington silt loam, 0 to 2 percent slopes	9.7	Flats on ground moraines, rises on ground moraines, flats on end moraines, rises on end moraines	Inclusions	Pewamo (5), Condit (5)
Berialington	BeB	Bennington silt loam, 2 to 6 percent slopes	22.9	Flats on ground moraines, rises on ground moraines, flats on end moraines, rises on end moraines	Inclusions	Pewamo (2), Condit (3)
Blount	BoA	Blount silt loams, 0 to 2 percent slopes	5.4	Depressions, Ground moraines	Inclusions	Pewamo (10)
Diodrit	ВоВ	Blount silt loams, 2 to 4 percent slopes	3.8	Depressions, Ground moraines	Inclusions	Pewamo (5)
Cardington	CaB	Cardington silt loam, 2 to 6 percent slopes,	16.6	Drainageways, Ground moraines	Inclusions	Pewamo (5)
Cardington	CaC2	Cardington silt loam, 6 to 12 percent slopes, eroded	2.0	End moraines, ground moraines	no	n/a
	GaC2	Gallman loam, loamy substratum, 6 to 12 percent slopes, eroded	0.1	Kames, outwash terraces	no	n/a
Gallman	GbA	Gallman silt loam, loamy substratum, 0 to 2 percent slopes	0.4	Depressions, Outwash terraces	Inclusions	Millgrove (5)
	GbB	Gallman silt loam, loamy substratum, 2 to 6 percent slopes	0.1	Outwash plains, kames, moraines, and outwash terraces	Inclusions	Millgrove (5)
Glynwood	GwB	Glynwood silt loam, 2 to 6 percent slopes	9.6	End moraines, ground moraines	no	n/a
Glynwood	GwC2	Glynwood silt loam, 6 to 12 percent slopes, eroded	1.6	End moraines, ground moraines	no	n/a
Jimtown	JmA	Jimtown silt loam, 0 to 2 percent slopes	0.1	Depressions, Outwash terraces	Inclusions	Millgrove (10)
Latham- Brecksville	LbF	Latham-Brecksville complex, 25 to 70 percent slopes	3.0	Latham—dissected areas on till plains; Brecksville—valley sides of dissected till plains	no	n/a
Lybrand	LyD2	Lybrand silt loams, 12 to 18 percent slopes, eroded	0.2	Ground moraines, end moraines	no	n/a
Lybianu	LyE2	Lybrand silt loams, 18 to 25 percent slopes, eroded	0.6	Ground moraines, end moraines	no	n/a
Millgrove	MfA	Millgrove silt loam, 0 to 2 percent slopes	0.5	Flats, Outwash terraces	yes	Millgrove (90)





TABLE 2
SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE SURVEY CORRIDOR

Soil Series	Symbol	Map Unit Description	Percent of Survey Corridor by Series	Topographic Setting	Hydric	Hydric Component (%)
Pewamo	PwA	Pewamo silty clay loam, 0 to 1 percent slopes	12.2	Depressions on ground moraines, flats on ground moraines, drainageways on ground moraines, depressions on end moraines, flats on end moraines, drainageways on end moraines	yes	Pewamo (85)
	SkA	Sloan silt loam, 0 to 2 percent slopes, occasionally flooded	0.7	Depressions, Flood plains	yes	Sloan (90)
Sloan	SnA	Sloan silt loam, till substratum, 0 to 2 percent slopes, occasionally flooded	2.3	Depressions on ground moraines, flats on ground moraines, drainageways on ground moraines, depressions on end moraines, flats on end moraines, drainageways on end moraines	yes	Sloan (85), Millgrove (5) Pewamo (5)
	SoA	Sloan silty clay loam, till substratum, 0 to 2 percent slopes, occasionally flooded	<0.01	Flats, Flood plains, Depressions, Ground moraines	yes	Sloan (85), Pewamo (8)
Udorthents	Uc	Udorthents	0.3	Ground moraines, end moraines, outwash terraces		
Coortnents	UdB	Udorthents, clayey- urban land complex, undulating	1.2	Drainageways, Ground moraines	Inclusions	Pewamo (5)

#### NOTES:

- (1) 5.5 % of study corridor is open water.
- (2) Data sources include:

USDA, NRCS. 2011 Soil Survey Geographic (SSURGO) Database. Available online at: http://soildatamart.nrcs.usda.gov/USDA, NRCS. February 2011. National Hydric Soils List by State. Available online at: ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric Soils/Lists/hydric soils.xlsx

USDA, NRCS. 2011. Soil Survey of Delaware County, Ohio.

National Wetland Inventory Map Review: National Wetland Inventory (NWI) wetlands are areas of potential wetland that have been identified from USFWS aerial photograph interpretation which have typically not been field verified. Forested and heavy scrub/shrub wetlands are often not shown on NWI maps as foliage effectively hides the visual signature that indicates the presence of standing water and moist soils from an aerial view. As a result, NWI maps do not show all the wetlands found in a particular area nor do they necessarily provide accurate wetland boundaries. NWI maps are useful for providing indications of potential wetland areas, which are often supported by soil mapping and hydrologic predictions, based upon topographical analysis using USGS topographic maps.





According to the NWI map of the Olive Green, Kilbourne, and Delaware, Ohio quadrangles, the survey corridor contained two mapped NWI wetlands, both being Palustrine Freshwater Emergent, seasonally flooded wetlands (PEM1C)<sup>1</sup>. There are also four Freshwater Ponds (two PUBGh, two PUBGx), and one Lake (L1UBHx). Portions of the two mapped NWI Palustrine Emergent wetlands were identified crossing Wetland 8 and Wetland 19. One NWI mapped Palustrine Unconsolidated Bottom wetland was shown covering the majority of Wetland 24. The NWI Lake feature was mapped on the western boundary of Wetland 20.

#### 3.3 Stream and River Crossings

Streams within the survey survey corridor are provided in Table 3. The locations of streams identified within the survey corridor are shown on Figures 2A through 2K. Within the survey corridor, 36 streams, totaling 9,532 feet, were assessed: 12 ephemeral, 20 intermittent, and 4 perennial waterbodies. URS has preliminarily determined the streams appear to be jurisdictional (i.e., "Waters of the U.S."), as they all appear to be tributaries that flow into or combine with other streams. A representative sample of color photographs were taken of the streams during the field survey and are provided in Appendix B.

TABLE 3

STREAMS IDENTIFIED WITHIN THE

TRENT-DELAWARE SECOND 138 kV CIRCUIT ECOLOGY SURVEY CORRIDOR<sup>1</sup>

Report Name	Stream Name	Flow Type	Approximate Length Within Survey Corridor (feet)
Stream 01	Tributary to Big Walnut Creek	Ephemeral	52
Stream 02	Tributary to Big Walnut Creek	Ephemeral	81
Stream 03	Tributary to Big Walnut Creek	Intermittent	227
Stream 04	Tributary to Big Walnut Creek	Ephemeral	144
Stream 05	Tributary to Big Walnut Creek	Intermittent	221
Stream 06	Big Walnut Creek	Perennial	218
Stream 07	Tributary to Prairie Run	Ephemeral	35
Stream 08	Prairie Run	Perennial	216
Stream 09	Tributary to Little Walnut Creek	Intermittent	271
Stream 10	Tributary to Little Walnut Creek	Intermittent	531
Stream 11	Tributary to Little Walnut Creek	Intermittent	222
Stream 12	Little Walnut Creek	Perennial	995
Stream 13	Tributary to Little Walnut Creek	Intermittent	5
Stream 14	Tributary to Little Walnut Creek	Intermittent	298
Stream 15	Tributary to Little Walnut Creek	Ephemeral	120
Stream 16	Tributary to Little Walnut Creek	Intermittent	1155
Stream 17	Tributary to Little Walnut Creek	Ephemeral	153
Stream 18	Johnson Run	Intermittent	235
Stream 19	Tributary to Alum Creek Reservoir	Intermittent	290
Stream 20	Tributary to Alum Creek Reservoir	Ephemeral	201





TABLE 3

STREAMS IDENTIFIED WITHIN THE

TRENT-DELAWARE SECOND 138 kV CIRCUIT ECOLOGY SURVEY CORRIDOR<sup>1</sup>

Report Name	Stream Name	Flow Type	Approximate Length Within Survey Corridor (feet)
Stream 21	Tributary to Alum Creek Reservoir	Intermittent	836
Stream 22	Tributary to Alum Creek Reservoir	Intermittent	212
Stream 23	Tributary to Alum Creek Reservoir	Ephemeral	111
Stream 24	Tributary to Alum Creek Reservoir	Ephemeral	277
Stream 25	Tributary to Alum Creek Reservoir	Ephemeral	115
Stream 26	Tributary to Big Run	Intermittent	430
Stream 27	Tributary to Big Run	Intermittent	560
Stream 28	Tributary to Olentangy River	Intermittent	156
Stream 29	Tributary to Olentangy River	Ephemeral	151
Stream 30	Tributary to Olentangy River	Intermittent	362
Stream 31	Tributary to Olentangy River	Intermittent	113
Stream 32	Tributary to Olentangy River	Intermittent	101
Stream 33	Olentangy River	Perennial	102
Stream 34	Tributary to Olentangy River	Ephemeral	84
Stream 35	Tributary to Olentangy River	Intermittent	127
Stream 36	Tributary to Olentangy River	Intermittent	125
Total: 36 Streams			9,532

<sup>1</sup>Streams are listed from east to west

#### 4.0 PONDS

Two ponds, totaling 1.45 acres, were identified within the Project survey corridor. The two ponds appear to be man-made for recreational use or stormwater retention. The locations of ponds identified within the Project survey corridor are shown on Figures 2A through 2K.

#### 5.0 SUMMARY

No national forests or parks designated or proposed wilderness areas, National Wild and Scenic Rivers, wildlife areas, wildlife refuges, wildlife management areas, or wildlife sanctuaries were identified within 1,000 feet of the proposed Project. Alum Creek State Park, the Olentangy River Ohio Scenic River, and the Jones/Logan Olentangy Scenic River easement are crossed by the Project corridor. Based on the nature of the construction within existing maintained right-of way, no or minimal temporary impacts to these areas are anticipated.

The proposed new circuit will cross multiple 100-year flood zone areas including in the vicinities of Big Walnut Creek, Little Walnut Creek, Alum Creek Reservoir, and the Olentangy River. Based on 2009 floodplain GIS data obtained from Delaware County, none of the proposed replacement pole locations are





located within 100-year flood zones. No changes in flood elevations are anticipated as a result of the Project.

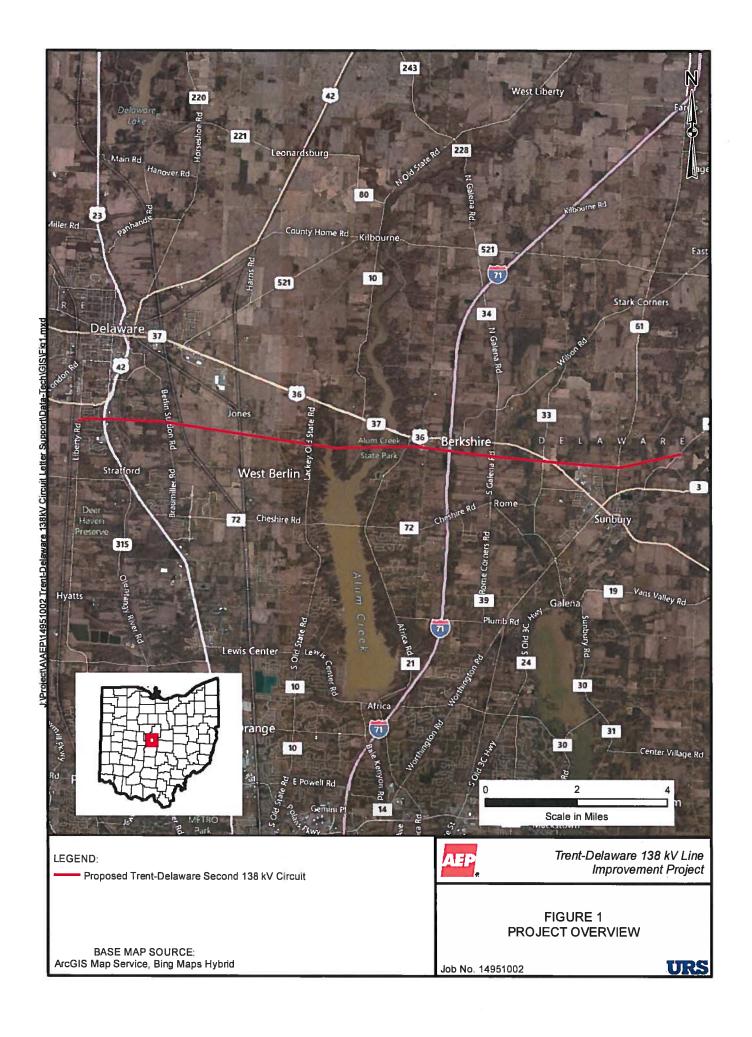
During the field survey, a total of 36 wetlands were identified within the survey corridor. The 36 wetlands totaled 9.4 acres within the survey area. These wetlands are of five wetland habitat types: 28 PEM wetlands, four PEM/PSS wetlands, two PSS wetlands, one PSS/PEM wetland, and one POW/PEM wetland. Twenty-five of the 36 wetlands were classified as Category 1 wetlands, and the remaining 11 wetlands were classified as Category 2 wetlands.

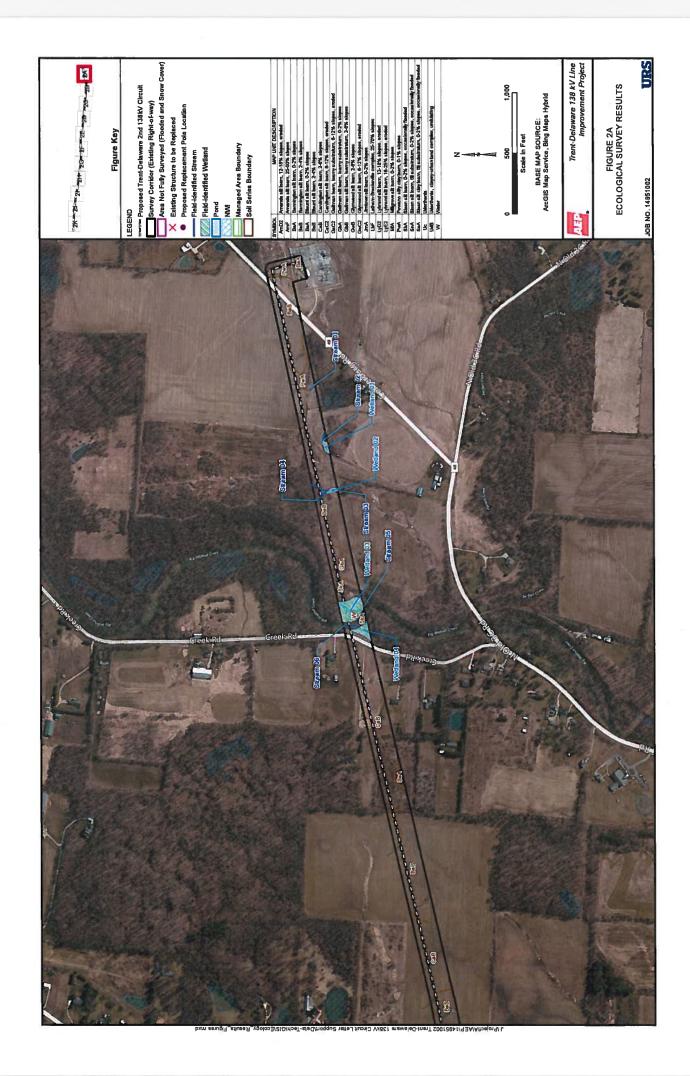
Within the survey corridor, 36 streams, totaling 9,532 feet, were assessed: 12 ephemeral, 20 intermittent, and 4 perennial waterbodies.

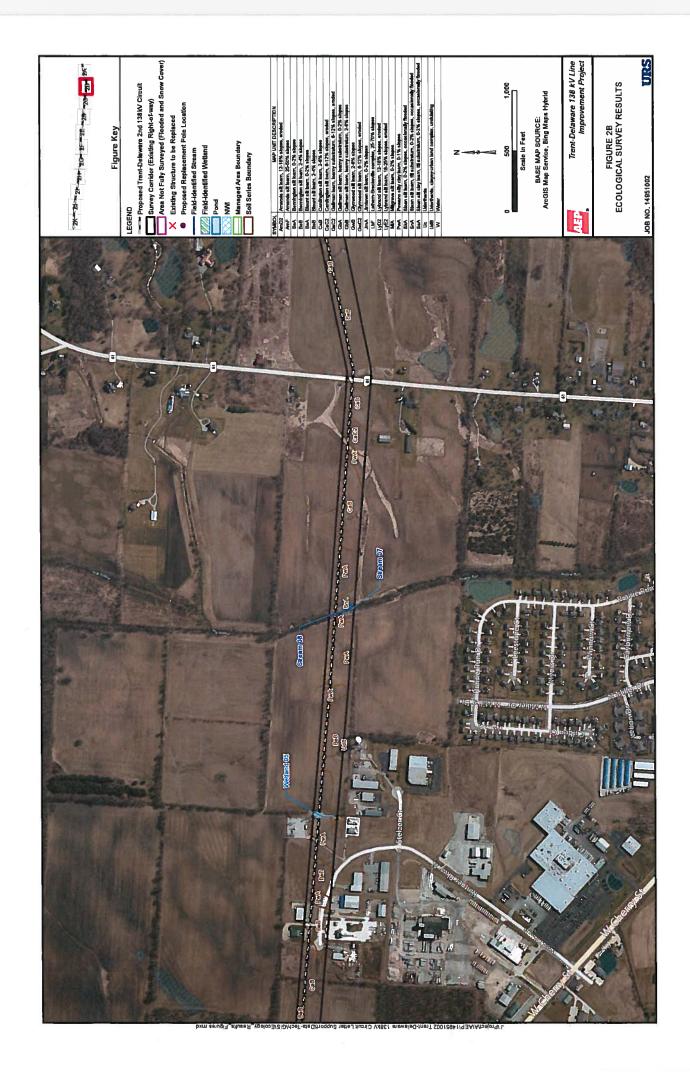
Two ponds, totaling 1.45 acres, were identified within the Project survey corridor. The two ponds appear to be man-made for recreational use or stormwater retention.

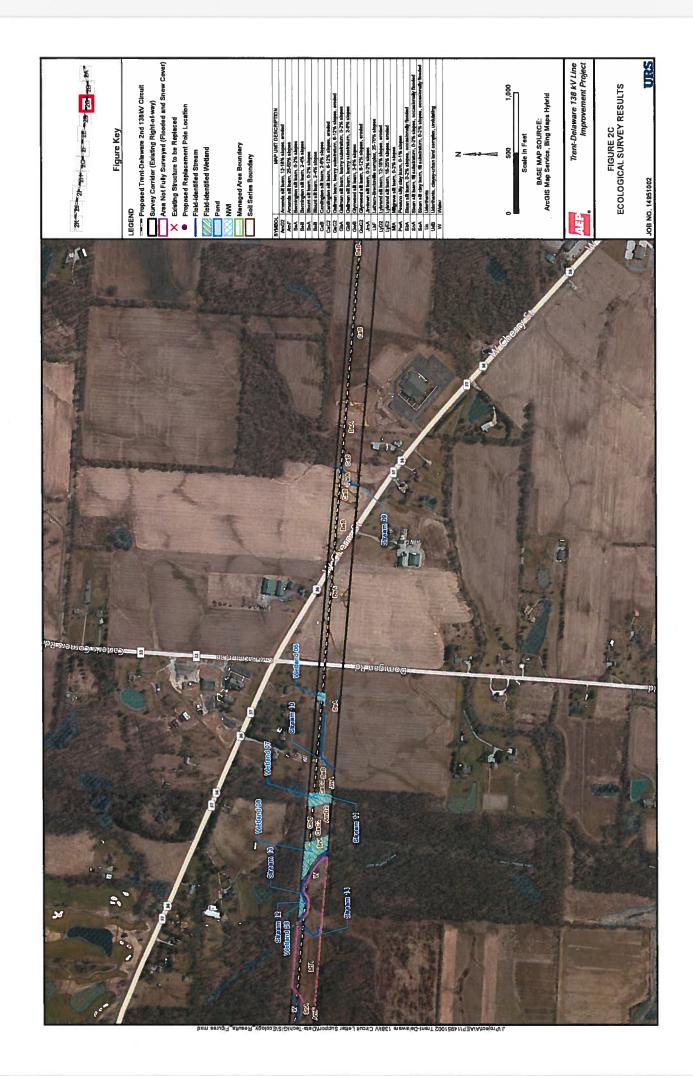
#### 6.0 CONCLUSION

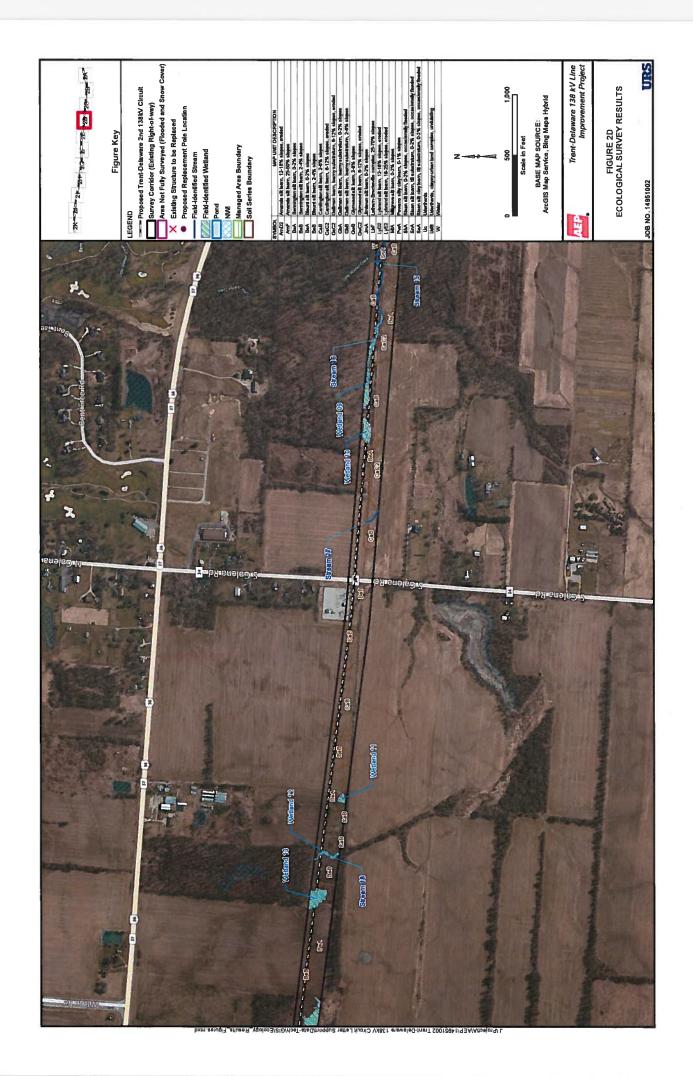
This report will be used to assist AEP's efforts to avoid special status ecological areas, wetlands, and streams to the extent possible during construction of the Project, including the use of access roads, thereby minimizing impacts to these features identified along the length of the new circuit. While access roads have not yet been fully engineered to date, it is expected that most wetlands and streams can be spanned due to their locations, size, and infrequent occurrence. Surficial impacts to wetlands are not likely due to the placement of wetland matting if vehicular traffic is necessary during stringing and structure replacement. These locations will be provided in the final access plan. Erosion control methods including silt fencing are expected to be used where appropriate to minimize runoff related impacts to wetlands and stream channels. As a consequence, significant impacts to these "Waters of the U.S." are not anticipated. Notification or permit applications under Sections 401 and/or 404 of the Clean Water Act are not expected to be required by either the Ohio EPA or the USACE for this project.

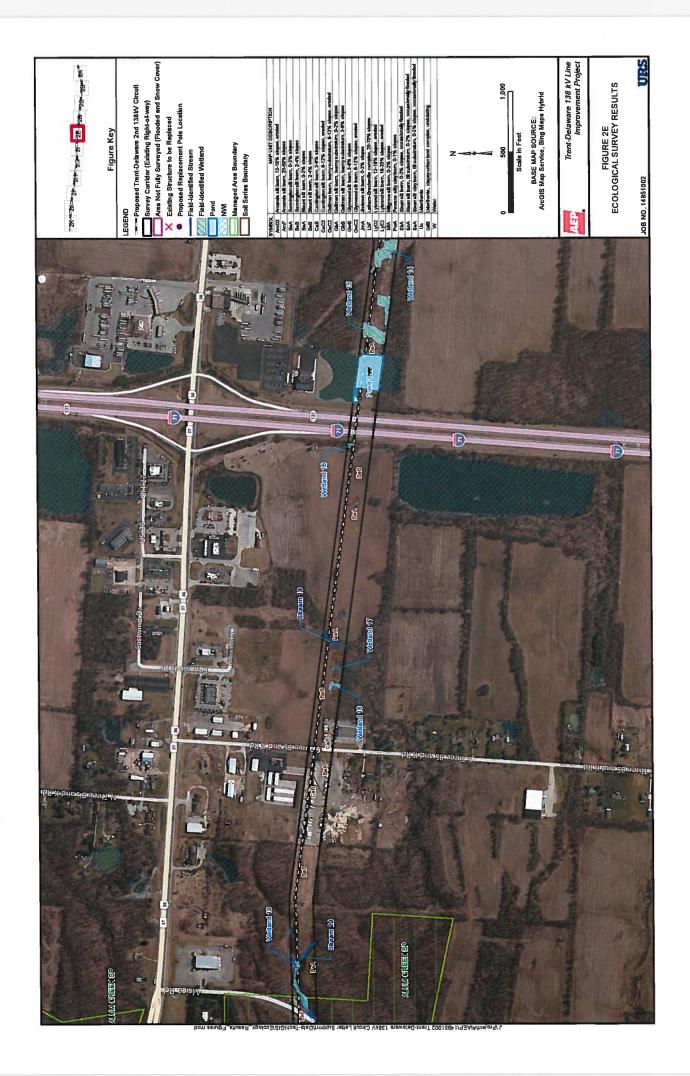


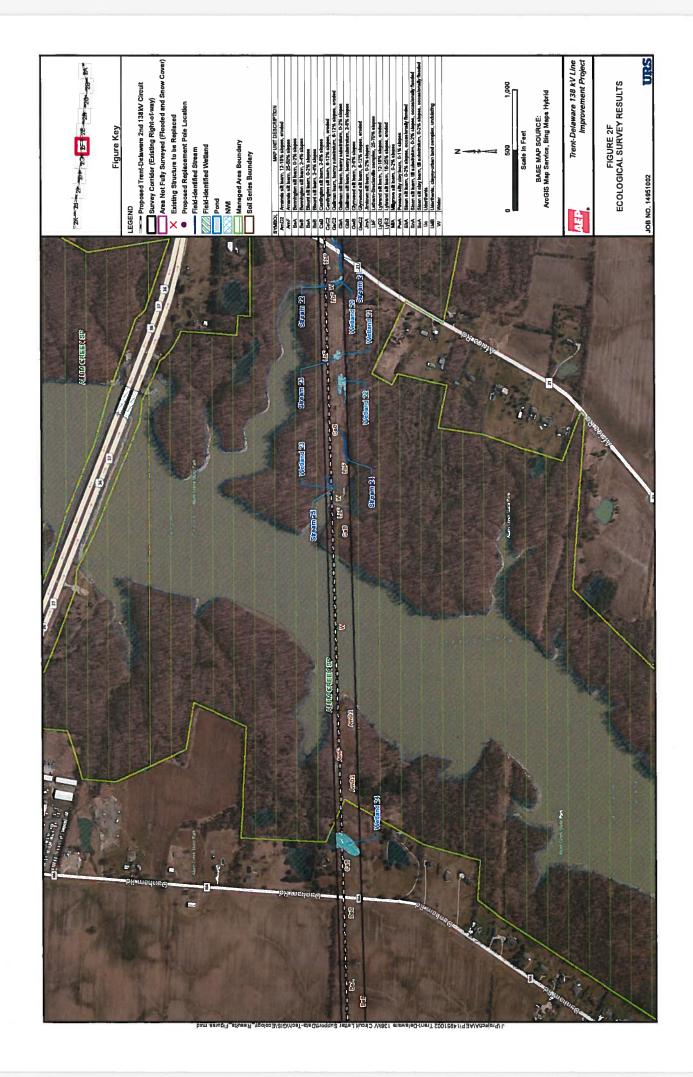


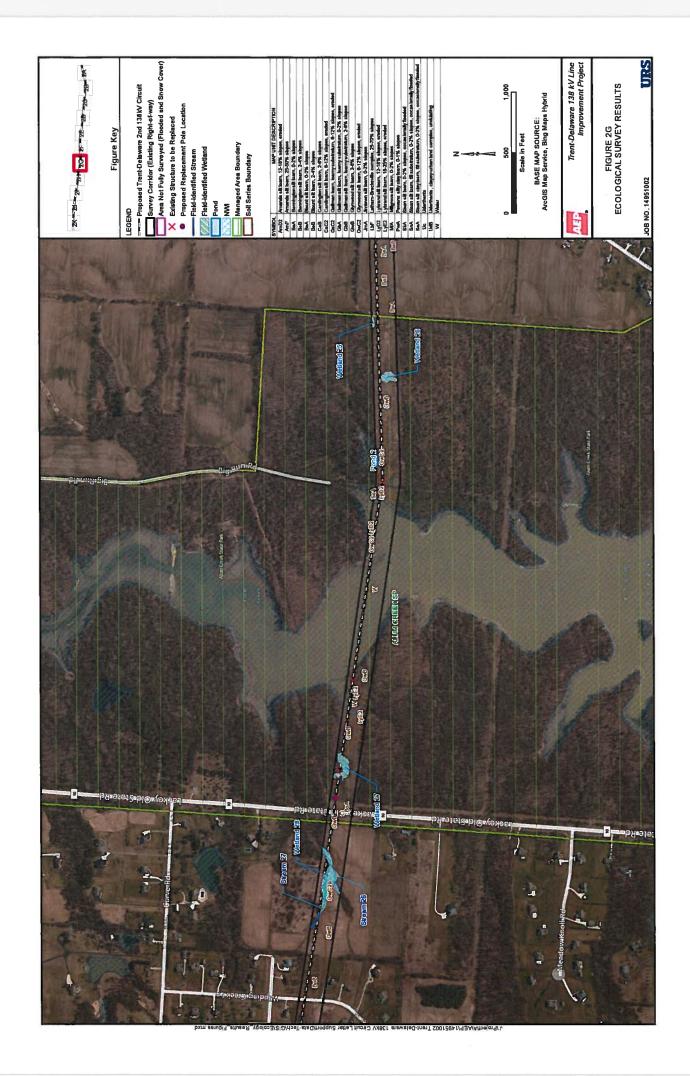




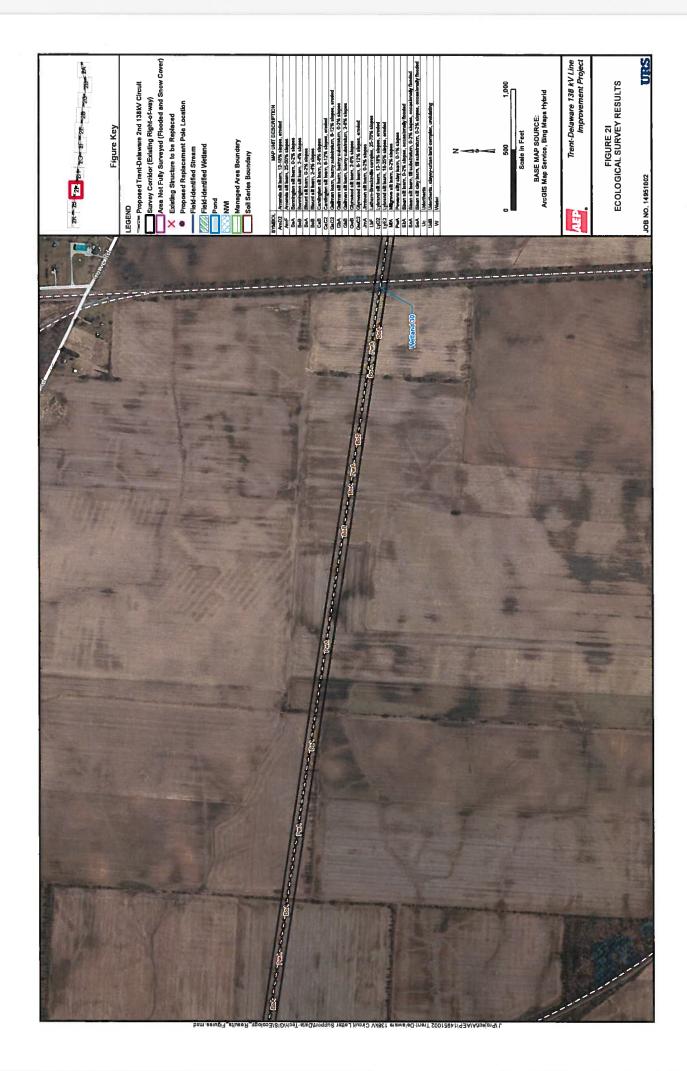


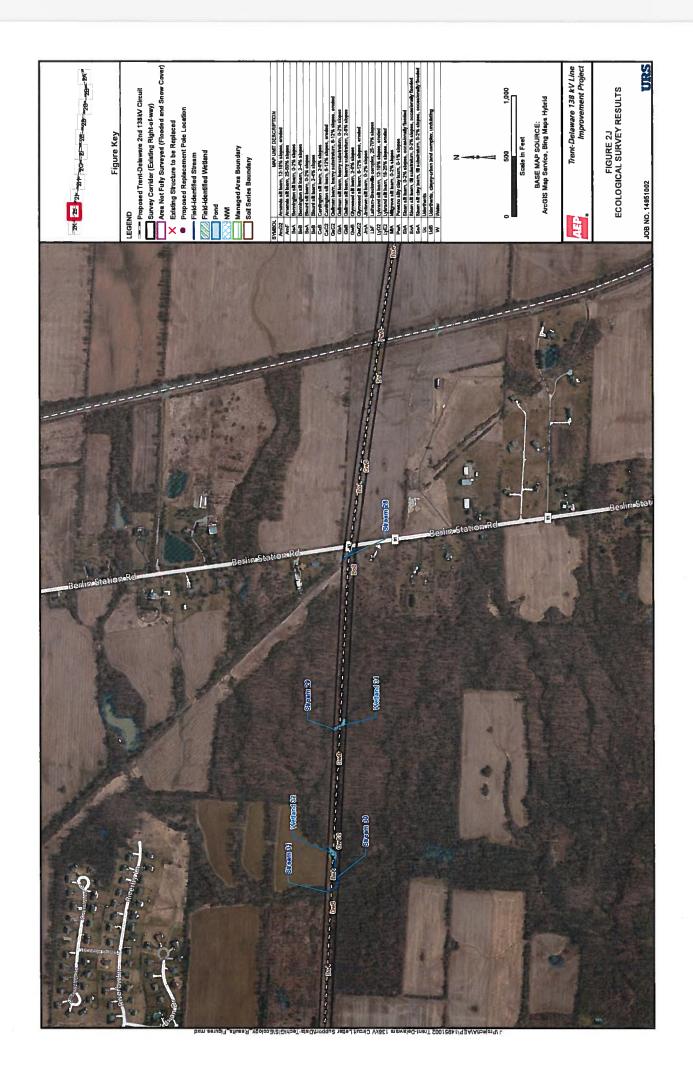


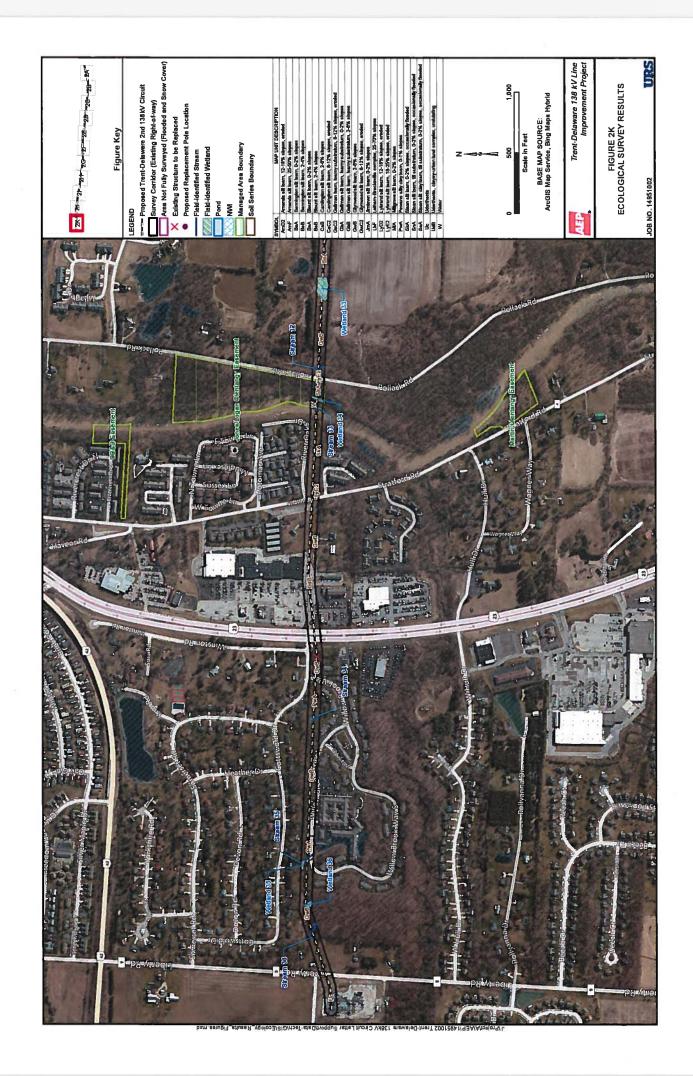












APPENDIX A

**ORAM FORMS** 

Metric 1. Wetland Area (size).    Metric 2. Wetland Area (size).   Metric 3. Wetland Area (size).   Metric 4. Wetland Area (size).   Metric 5. Wetland Area (size).   Metric 6. Wetland Area (size).   Select one size class and assign score.   Sol acres (2.02 2ra) (6 ptp)   10 to 425 scres (1.04 to 4.01 ta) (4 ptp)   3 to 10 acres (1.04 to 1.01 ta) (4 ptp)   3 to 10 acres (1.04 to 1.01 ta) (4 ptp)   3 to 10 acres (0.04 to 0.05 ta) (2 to 1.05 ta) (2 to 1.0	ORAM v. 5.0 Fleid	Form Quantitative Rating	W-BAO-1221/2-00
Metric 1. Wetland Area (size).  Select one size class and assign score.  Jed ourse, (20.2 the) (6 pts)  Sol occess (4 to 10.1 ha) (4 pts)  Metric 2. Upland buffers and surrounding land use.  2a. Calculate everage buffer width. Select only one and essign score. Do not double check  MEDIUM. If sol everage occess (4 to 10.1 ha) (4 pts)  Nethodology of surrounding land use. Select one or double check and average.  WERY LOW. 2nd growth or elder forest, prairie, savannah, wildlife area, etc. (7)  VERY LOW. 2nd growth or elder forest, prairie, savannah, wildlife area, etc. (7)  Wething of surrounding land use. Select one or double check and average.  WERY LOW. 2nd growth or elder forest, prairie, savannah, wildlife area, etc. (7)  Wething of surrounding land use. Select one or double check and average.  Wething of surrounding land use. Select one or double check end average.  Wething of surrounding land use. Select one or double check and everage.  Sol occessorable forest.  Sol occe	Site: AEP	TRENT- DELAUARE Rater(s): BAD, JAC	Date: /2/21/12
Oct   1 to 0.03 acres (0.04 to <0.12 hg) (1 pt)   Oct   acres (0.04 hg) (pts)	max 6 pts. subtots	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)	
WIDE. Buffers average 50m (194ft) or more around wetland perimeter (7)  MREDIUM. Buffers average 10m to <50m (82 to <50ft) around wetland perimeter (4)  NARROW. Buffers average 50m (194ft) around wetland perimeter (1)  VERY NARROW. Buffers average 50m (32ft to <82ft) around wetland perimeter (1)  2b. Intensity of surrounding land use. Select one or double check and average.  VERY LOW. 2d growth or older forest, praire, savamane, widlier area, atc. (7)  LOW. Old field (>10 years), shrub land, young second growth forest. (5)  HIGH. Urban, industrial, open pasture, park, conservation tillage, new fallow field. (3)  HIGH. Urban, industrial, open pasture, park, conservation tillage, new fallow field. (3)  High pH groundwater (3)  Saucres of Water. Score all that apply.  High pH groundwater (3)  Part of industrial and other human use (10 year floodplain (1))  Seasonal/Intermittent surface water (3)  Part of riparian or upland corridor (1)  Part of riparian or upland corridor (1)  Seasonal/Intermittent surface water (ake or stream) (5)  3d. Unation hundation/saturation. Score one or double check and sverage.  None or none apparent (12)  Recovering (3)  Recovering (3)  Recovering (3)  Recovering (3)  Recovering (4)  Recovering (5)  Recovering (6)  Recovering (7)  Very good (6)  Ood (5)  Recovering (8)  Recovering (9)  Recovering	2 3	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	nd use.
Metric 3. Hydrology.    Machine   Ma	max 14 pts. subtota	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7 MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (8 NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter intensity of surrounding land use. Select one or double check and average.  VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation till.	erimeter (4) perimeter (1) per (0) petc. (7)
High pH groundwater (3) Other groundwater (3) Precipitation (1) Seasonall/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select only one and assign score.  3d. Duration inundation/saturation. Score one or doble check and average.  None or none apparent (12) Recovered (7) Recovering (3) Recovering (4) Recovering (5) Recovering (5) Recovering (6) Recovering (6) Recovering (7) Recovering	10 13	Metric 3. Hydrology.	
None or none apparent (12) Recovered (7) Recovered (7) Recovering (3) Recent or no recovery (1)    Check all disturbances observed   Dilling/grading   Total bed/RR track   Dilling/grading   Total bed/Recoverd   Dilling/grading   Dilling/grading   Total bed/Recoverd   Dilling/grading   Total bed/Recoverd   Dilling/grading   Total bed/Recoverd   Dilling/grading   Dilling/grading   Dilling/grading   Dilling/grading   Dilling/grading   Dilling/grading   Dilling/grading   Dilling/gradin	max 30 pts. subtotel	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)	year floodplain (1) ween stream/lake and other human use (1) t of wetland/upland (e.g. forest), complex (1) t of riparian or upland corridor (1) nundation/saturation. Score one or dbl check ni- to permanently inundated/saturated (4) gularly lnundated/saturated (3) usonally saturated in upper 30cm (13 in) (4)
max 20 pls. sublotal  4a. Substrate disturbance. Score one or double check and average.  None or none apparent (4)  Recovered (3)  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)  Recovering (4)  Recovering (4)  Recovering (5)  Recovering (6)  Recovering (6)  Recovering (7)  Recovering (8)  Recovering (9)  Recover		None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)  Check all disturbances observed ditch dike weir  Check all disturbances observed ditch poir fillin road dred	nt source (nonstormwater) g/grading d bed/RR track dging
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)  Recovered (6)  Recovering (3)  Recent or no recovery (1)	8.5 21.5	Metric 4. Habitat Alteration and Developmen	t.
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)  Recent or no recovery (1)  Poor (1) Check ail disturbances observed Finowing Grazing Finowing Finowi	max 20 pts. subtotal	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)	
None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)  None or none apparent (9) Recovering (3) Recent or no recovery (1)  Check all disturbances observed  Find wing Grazing Grazi		Poor (1)	
woody debris removal subtotal this page woody debris removal toxic pollutants nutrient enrichment	21,5	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1) Recent or no recovery (1) Recovering (3) Selective cutting (4) Selective cutting (	paceous/aquatic bed removal mentation Iging ping

THE ST

WETLAND 1
ORAM v. 5.0 Field Form Quantitative Rating

W-BAD-122112-02

Otto AND TRAIT DO DE PO	torials Bac	1	Date: /2/2///2
Site: ACP TRENT- DECAMPAGE   Ra	ter(s): /ኃ/ዓይ	), JAC	Date. 10/2//12
O 21.5 Metric 5. Special Wet		े ख 	
max 10 pts. subtotal Check all that apply and score as indicate	d.		
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetla Lake Erie coastal/tributary wetla Lake Plain Sand Prairies (Oak Relict Wet Prairies (10) Known occurrence state/federa Significant migratory songbird/v Category 1 Wetland. See Ques	and-restricted hydro Openings) (10) i threatened or enda vater fowl habitat or	angered species (10)	
Motric 6 Plant comm		- ' '	crotopography.
3 27.0	,	,	o. ctopog. apry.
max 20 pts. subtotal 6a. Wetland Vegetation Communities.		Community Cover Scale	
Score all present using 0 to 3 scale.  Aquatic bed	0		1ha (0.2471 acres) contiguous area rises small part of wetland's
2 Emergent	4		oderate quality, or comprises a
2 Shrub		significant part but is of	
Forest	2		rises significant part of wetland's
Mudflats		1	oderate quality or comprises a small
Open water		part and is of high qual	, - ,
Other	3		ignificant part, or more, of wetland's
6b. horizontal (plan view) Interspersion.		vegetation and is of high	
Select only one.			
High (5)	Narrative D	escription of Vegetation C	
Moderately high(4)	low		predominance of nonnative or
Moderate (3)		disturbance tolerant na	
Moderately low (2)	mod		component of the vegetation,
Low (1)		_	d/or disturbance tolerant native spp
None (0)  6c. Coverage of invasive plants. Refer		1	nd species diversity moderate to
to Table 1 ORAM long form for list. Add		threatened or endange	enerally w/o presence of rare
or deduct points for coverage	high		e species, with nonnative spp
Extensive >75% cover (-5)	riigi	1 '	erant native spp absent or virtually
			iversity and often, but not always,
3 Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)			nreatened, or endangered spp
Nearly absent <5% cover (0)		***************************************	industries, or chadingeros opp
Absent (1)	Mudflat and	d Open Water Class Qualit	tv
6d. Microtopography.	0	Absent <0.1ha (0.247 ad	
Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to	
2 Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.4	7 to 9.88 acres)
Coarse woody debris >15cm (6		High 4ha (9.88 acres) or	more
Amphibian breeding pools		raphy Cover Scale	
	0	Absent	
	№1	Present very small amou	nts or if more common
1		of marginal quality	
1	2	Present in moderate amo	
		quality or in small amou	
	3	Present in moderate or g	reater amounts
21/		and of highest quality	

PAT

WETLAND 02\_ ORAM v. 5.0 Field Form Quantitative Rating

W. BAD-120112-03

Site: AEP	TRENT- DEL	AWARE	Rater(s):	BAD, JAC		Date: 12/2	1/12
00	Metric 1.	Wetland A	rea (size	).			•
max 6 pts. subtotal	>50 ac 25 to < 10 to < 3 to <1 0.3 to 0.1 to	class and assign sco eres (>20.2ha) (6 pts 50 acres (10.1 to <2 25 acres (4 to <10.1 0 acres (1.2 to <4ha <3 acres (0.12 to <1. <0.3 acres (0.04 to <	0.2ha) (5 pts) ha) (4 pts) ) (3 pts) 2ha) (2pts)		g va		
/ /		cres (0.04ha) (0 pts) <b>Upland bu</b>	ffers and	surround	ing land use.	• '	
max 14 pts. subtotal	WIDE. MEDIL NARRO VERY 2b. Intensity of s VERY LOW. MODE	OW. Buffers averag NARROW. Buffers a urrounding land use LOW. 2nd growth or Old field (>10 years)	m (164ft) or more 25m to <50m (8 e 10m to <25m (8 everage <10m (< Select one or or older forest, pra , shrub land, you idential, fenced	a around wetland per 2 to <164ft) around 32ft to <82ft) around 32ft) around wetlar double check and a irie, savannah, wild ing second growth to pasture, park, cons	erimeter (7) wetland perimeter (4) d wetland perimeter (1) id perimeter (0) verage. lilife area, etc. (7) forest. (5) ervation tillage, new fall		
13 14		Hydrology		cropping, mining, c	onstruction: (1)		
max 30 pts. subtotal	High pl Other g Precipi Seasor Perenn 3c. Maximum wa >0.7 (2 0.4 to 0	Vater. Score all that discount of groundwater (5) action (1) action (1) all intermittent surfaction (1) select or 7.6in) (3) arm (15.7 to 27.6in) (15.7in) (1) to natural hydrological discount of the first of the f	ce water (3) te or stream) (5) ly one and assig (2)	l 3d. n score.	Part of wetland/u Part of riparian of Duration inundation/sa Semi- to perman Regularly inundation/sa Seasonally inundation	ain (1)  //lake and other hum  upland (e.g. forest), or  upland corridor (1)  turation. Score one  nently inundated/satuated/saturated (3)	complex (1) or dbl check. urated (4)
,	Recove	r none apparent (12 red (7) ring (3) or no recovery (1)	Check all distuditch ditch dike weir stormwa	rbances observed	point source (not filling/grading) road bed/RR traddredging other	ck	
7.5 21.5	Metric 4.	Habitat Al					
max 20 pts. subtotal	None of Recover Recover Recent Ab. Habitat devel Excelle Very go Good (in Modera Fair (3) Poor to	oring (2) or no recovery (1) opment. Select only nt (7) nod (6) 5) tely good (4) fair (2)					
		tion. Score one or o					
21.5	Recove	r none apparent (9) red (6) ring (3) or no recovery (1)	mowing grazing clearcut selective	cutting ebris removal	shrub/sapling rer herbaceous/aqua sedimentation dredging farming nutrient enrichme	atic bed removal	
subtotal this pa	-		L toxic poi	ruidillo			

Site:	AEP	Th	ENT-F	PELAWARE	Rater(s):	B	AD/ VAC	Date: /3/21/10
	21.5	7					•	7
	subtotal first							
0	21.5	Me	etric 5	. Special W	etlands.			
max 10 pts.	subtota	Chec	k all that a	pply and score as indi	cated.			
		ŀ	Bog ( Fen (					
			Old g	rowth forest (10)				
		ŀ		e forested wetland (5		1		
		<u> </u>	Lake	Erie coastal/tributary v Erie coastal/tributary v	vetland-unrestr vetland-restrict	ictea ny ed hydr	yarology (10) cology (5)	
			Lake	Plain Sand Prairies (C	ak Openings) (	(10)	-1097 (0)	
		-	Relict	Wet Prairies (10)	land the cont			
		-	Signifi	cant migratory songb	ierai threatened ird/water fowl h	d or end abitatic	dangered species (10)	
	<del>,</del>	[	Categ	ory 1 Wetland. See C	Question 1 Qua	litative	Rating (-10)	
12	195	Me	tric 6.	Plant com	munities	s. in	terspersion, mid	rotonography
	110			1		-,	ioropororori, mic	notopograpny.
max 20 pts	subtotal	6a. W	etland Ve	getation Communities	Veg	etation	Community Cover Scale	
		Score	Aquati	tusing 0 to 3 scale.		01	Absent or comprises <0.1	ha (0.2471 acres) contiguous area
			/ Emerg			'	vegetation and is of more	ses small part of wetland's derate quality, or comprises a
	$D^*$	1	Shrub				significant part but is of	low quality
		-	Forest Mudfla			2	Present and either compri	ses significant part of wetland's
		<u> </u>	Open v				vegetation and is of mod	lerate quality or comprises a small
			Other_			3	part and is of high qualit	y unificant part, or more, of wetland's
			orizontal (pl only one.	lan view) Interspersio	n		vegetation and is of high	quality
		Ē	High (5		Narı	ative C	Description of Vegetation Q	ıality
		-	Modera Modera	ately high(4)		low	Low spp diversity and/or p	redominance of nonnative or
		,		ately low (2)	<del></del>	mod	disturbance tolerant nati	ve species
		۲ ک	Z Low (1)	)		11100	although nonnative and/	omponent of the vegetation, or disturbance tolerant native spp
		6c Cc	None (	0) invasive plants.  Refe			can also be present, and	species diversity moderate to
		to Tabl	e 1 ORAM	long form for list. Ad	r Id		moderately high, but ger	erally w/o presence of rare
		or ded	uct points f	or coverage		high	A predominance of native	a spp species, with nonnative spp
		1	Extensi	ve >75% cover (-5)			and/or disturbance tolera	nt native spp absent or virtually
		5	Sparse	ite 25-75% cover (-3) 5-25% cover (-1)			absent, and high spp div	ersity and often, but not always
			Nearly a	absent <5% cover (0)	-		the presence of rare, three	eatened, or endangered spp
		C 14:	Absent	(1)		flat and	i Open Water Class Quality	
		Score a	crotopogra	phy. using 0 to 3 scale.		0	Absent <0.1ha (0.247 acre	s)
			Vegetal	ed hummucks/tussuc	ks	2	Low 0.1 to <1ha (0.247 to 2	2.47 acres)
		, $\Box$	Coarse	woody debris >15cm	(6in)	3	Moderate 1 to <4ha (2.47) High 4ha (9.88 acres) or m	
		l  -,	Standin	g dead >25cm (10in)	dbh			<u> </u>
		<u> </u>	Amphib	ian breeding pools	Micro		raphy Cover Scale	
						1	Absent	<i>y</i>
_		r				."	Present very small amounts of marginal quality	or it more common
EHOR	41				<del></del>	2	Present in moderate amour	ts, but not of highest
19.5	'					2	quality or in small amount	s of highest quality
102-						3	Present in moderate or great and of highest quality	ter amounts
120							1 and or nignest quality	

WETLAND 03 ORAM v. 5.0 Field Form Quantitative Rating Site: Rater(s): BND JAC TREAT- DELAWARE Metric 1. Wetland Area (size). max 6 pts. subtotal Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) Metric 2. Upland buffers and surrounding land use. 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) Intensity of surrounding land use. Select one or double check and average. 2b. 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) Metric 3. Hydrology. 25 max 30 pts. subtotal Sources of Water. Score all that apply. 3a. 3b. Connectivity. Score all that apply. High pH groundwater (5) 100 year floodplain (1) A Other groundwater (3) Between stream/lake and other human use (1) Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Seasonal/Intermittent surface water (3) 6 Part of riparlan or upland corridor (1) Duration inundation/saturation. Score one or dbl check. Perennial surface water (lake or stream) (5) 3d. 3с. Maximum water depth. Select only one and assign score. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 2 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) Modifications to natural hydrologic regime. Score one or double check and average. 3e. None or none apparent (12) Check all disturbances observed Recovered (7) ditch point source (nonstormwater) Recovering (3) tile. filling/grading Recent or no recovery (1) dike road bed/RR track welr dredging stormwater input other 2౭లు Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) 2.5 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) 3 Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Check all disturbances observed Recovered (6) shrub/sapling removal mowing Recovering (3) grazing herbaceous/aquatic bed removal Recent or no recovery (1) clearcutting sedimentation selective cutting dredging woody debris removal farming toxic pollutants nutrient enrichment subtotal this page last revised 1 February 2001 jjm

WETCHND 3

W-BAD-12212-04

ORAM v. 5.0 Field Form Quantitative Rating

Site: AEP TRENT-DELAWARE	Rater(s): /SA	o JAC	Date: /2/21//2
subtotal first page  Metric 5. Special Womax 10 pts. subtotal Check all that apply and score as indicated by the subtotal Check all that apply are subtotal Check all that apply are subtotal Check all that apply and score as indicated by the subtotal Check all that apply are s			
Old growth forest (10)  Mature forested wetland (5)  Lake Erie coastal/tributary v  Lake Erie coastal/tributary v  Lake Plain Sand Prairies (0)  Relict Wet Prairies (10)  Known occurrence state/fed  Significant migratory songbi  Category 1 Wetland. See C	vetland-unrestricted hyd vetland-restricted hydrol lak Openings) (10) leral threatened or enda rd/water fowl habitat or Question 1 Qualitative Ra	ngered species (10) usage (10) ating (-10)	opography.
4 39 Wetric 6. Plant com	•	, , , ,	l S. mlerry
max 20 pts. subtotal 6a. Wetland Vegetation Communities	. Vegetation (	Community Cover Scale	M
Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.	
Aquatic bed	1	Present and either comprises s	
2 Emergent		vegetation and is of moderate	
3 📝 Shrub		significant part but is of low qu	
. Forest	2	Present and either comprises si	
Mudflats		vegetation and is of moderate	quality or comprises a small
Open water		part and is of high quality	
Other	3	Present and comprises significa	int part, or more, of wetland's
6b. horizontal (plan view) Interspersion	n.	vegetation and is of high quali	itv
Select only one.		1 3	
High (5)	Narrative De	escription of Vegetation Quality	
Moderately high(4)	low	Low spp diversity and/or predor	
Moderate (3)	IOW	disturbance talegant notice on	ninance of nonnative or
Moderately low (2)		disturbance tolerant native sp	
	mod	Native spp are dominant compo	
Low (1)		although nonnative and/or dis	turbance tolerant native spp
None (0)		can also be present, and spec	
6c. Coverage of invasive plants. Refe		moderately high, but generally	woo presence of rare
to Table 1 ORAM long form for list. Ac		threatened or endangered spr	
or deduct points for coverage	hlgh	A predominance of native speci	
Extensive >75% cover (-5)		and/or disturbance tolerant na	
Moderate 25-75% cover (-3)		absent, and high spp diversity	and often, but not always,
- Cparse 3-25 / 66 ver (-1)		the presence of rare, threaten	ed, or endangered spp
Nearly absent <5% cover (0			-
Absent (1)	Mudflat and	Open Water Class Quality	
6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 a	acres)
/ Vegetated hummucks/tussu	cks 2	Moderate 1 to <4ha (2.47 to 9.8	8 acres)
Coarse woody debris >15cn		High 4ha (9.88 acres) or more	
3 Standing dead >25cm (10in	) dbh		
/ Amphibian breeding pools		aphy Cover Scale	
	0	Absent	
	1	Present very small amounts or it	more common
	Ċ.	of marginal quality	more commun
at 2	2	Present in moderate amounts, b	ut not of highest
9T. Q	2	quality or in small amounts of	
	3		
72	J	Present in moderate or greater a	imounts
イク		and of highest quality	

Site: AFP	TRENT-DEZAWARE	Rater(s):	BAD TAC		Date:	12/21/12
22	Metric 1. Wetland A	rea (size).		40		
	Select one size class and assign scor >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha > 0.3 to <3 acres (0.12 to <1.3 0.1 to <0.3 acres (0.04 to < <0.1 acres (0.04ha) (0 pts)	0.2ha) (5 pts) ha) (4 pts) ) (3 pts) 2ha) (2pts)				
8 10	Metric 2. Upland bu	ffers and	surroundin	ig land use.		
max 14 pts. subtotal 2	2a. Calculate average buffer width. S WIDE. Buffers average 50n MEDIUM. Buffers average VERY NARROW. Buffers a b. Intensity of surrounding land use. VERY LOW. 2nd growth or LOW. Old field (>10 years), MODERATELY HIGH. Resi HIGH. Urban, industrial, op	n (164ft) or more a 25m to <50m (82 to 10m to <25m (32 verage <10m (32 Select one or do older forest, prairly shrub land, young idential, fenced pa	round wetland pering content of the	meter (7) etland perimeter (4) wetland perimeter (1) perimeter (0) rage. e area, etc. (7) est. (5) vation tillage, new fallo	w field. (3)	
16 26	Metric 3. Hydrology	en pasture, row cr	opping, mining, con	struction. (1)		
max 30 pts. subtotal 3:	a. Sources of Water. Score all that a High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/intermittent surface Perennial surface water (lake to Maximum water depth. Select only 20.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (1) 0.4 with the water depth (15.7in) (1) Modifications to natural hydrologic None or none apparent (12)	e water (3) e or stream) (5) y one and assign s 2) regime. Score or	3d. Di score.	Part of riperian or uration inundation/satu Semi- to permane Regularly inundation Seasonally inundation Seasonally Satura	in (1) ake and othe pland (e.g. fo upland com- uration. Score ently inundate ed/saturated ated (2)	prest), complex (1) idor (1) re one or dbi check. ed/saturated (4) I (3)
3	Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater	[] []	point source (nons)  filling/grading  road bed/RR track dredging  other  box	•	
10 36 N	Metric 4. Habitat Alt	eration an	d Develop	ment.	-	
max 20 pts. subtotal 4 <sub>E</sub>	Habitat development. Select only Excellent (7)  Very good (6)  Good (5)  Moderately good (4)					
40	Habitat alteration. Score one or do		<del></del>			
34.5		Check all disturbed mowing grazing clearcutting selective cu woody debutoxic polluta	itting is removal	shrub/sapling remoderate herbaceous/aquatifus sedimentation dredging farming nutrient enrichmen	ic bed remov	<i>r</i> al
last revised 1 February 2	2001 iim	<u> </u>		<del></del>		

Site:	ACP	TRENT	- DEL	ANARE	Rater(	s):	BAR	<u>2 V</u>	THE	Date: /2/2//12
	HCP  Jubitotal first pag  Subtotal	Metr	It that app Bog (10 Fen (10 Old grot Mature Lake Er Lake Er	Special Voily and score as Inc.	Vetland dicated. 5) wetland-ur	ds.	ed hydro hydrolog	logy (	(10)	Date: /2/2///2
3	2 6		Relict W Known of Signification Categor	let Prairies (10) occurrence state/fe int migratory song y 1 Wetland. See Plant con	ederal threa bird/water f Question 1	itened of lowl habi Qualitat ties,	r endang itat or us tive Ratii	age ( ng (-1 <b>rsp</b>	ersion, microto	pography.
max 20 pts.				tation Communitie	es.		ation Co	mmu	ınity Cover Scale	
		Score all		sing 0 to 3 scale.			0 /	Abser	nt or comprises <0.1ha (0.24	171 acres) contiguous area
			Aquatic			•	1	Prese	ent and either comprises sma	all part of wetland's
	_	_   2	Emerge	זנ				veg	etation and is of moderate q	uality, or comprises a
	3	5. <u>                                    </u>	Shrub					sigr	nificant part but is of low qua	lity
			Forest			2	2	Prese	ent and either comprises sign	nificant part of wetland's
			Mudflats					veg	etation and is of moderate q	III ality or comprises a small
			Open wa	ater				part	t and is of high quality	danity of comprises a small
			Other				3 1	Prese	ent and comprises significant	I mark as a second second
	(	6b. horiz		n view) interspersi	ion	`	<b>"</b>	You	station and in of high available	part, or more, of wetland's
		Select on	298	Henry Interopered				veg	etation and is of high quality	
	•	001001011	High (5)			Mamati	hia Daa		<b>515 4.4 -</b>	
		$\vdash$		ali i black (4)			ive Desc	cripti	on of Vegetation Quality	
		<u> </u>		ely high(4)		Ю	w l	_ow s	spp diversity and/or predomir	nance of nonnative or
•		$\vdash$	Moderati	e (3)				dist	urbance tolerant native spec	ies
		1 4		ely low (2)		me	1 bo	Vative	spp are dominant compone	ent of the vegetation.
		' <u> </u>   <u> </u>	Low (1)				- 1	altho	ough nonnative and/or distur	rbance tolerant native snn
			None (0)					can	also be present, and specie	s diversity moderate to
	6	c. Cove	rage of in	vasive plants. Re	fer			mod	lerately high, but generally w	V/O Dresence of rare
				ong form for list. A	Add		1	thre	atened or endangered spp	n - presentes of fare
	C	or deduct	points for	coverage		hig	gh /	pred	dominance of native species	with nonnative spn
			Extensiv	e >75% cover (-5)		`		and/	or disturbance tolerant nativ	e son shoot e-viduelly
	13			25-75% cover (-3				aher	ent, and high spp diversity ar	e spp absent or virtually
		/ <del>/~</del>	Sparse 5	-25% cover (-1)	-,			thou	process of sees three to a	nd oiten, but not always,
				osent <5% cover (	٥١			416	presence of rare, threatened	, or endangered spp
			Absent (		0)	Mudel	4 d O.	M	States Oles On the	
	e		topograp	,					Vater Class Quality	
				sing 0 to 3 scale.		0			nt <0.1ha (0.247 acres)	
	•			d hummucks/tuss		1			.1 to <1ha (0.247 to 2.47 acr	
		1 1				2			rate 1 to <4ha (2.47 to 9.88	acres)
		2	Chandle v	oody debris >15c	m (bin)	3		ligh 4	lha (9.88 acres) or more	
	_		otariding	dead >25cm (10in	n) dbh					· · · · · · · · · · · · · · · · · · ·
			wmbulbis	in breeding pools		Microto	pograp	hy C	over Scale	
						0		bsen		
						.1	F	reser	nt very small amounts or if m	nore common
							100		arginal quality	
10						2	* : P		nt in moderate amounts, but	not of highest
st. 2								quali	ity or in small amounts of hig	ihest quality
<u></u>						3	P	reser	nt in moderate or greater am	ounte
20						_	ľ		of highest quality	Ourno

WETZAND 05 W- BAD- 122112 - 01
Date: 12/21/12 ORAM v. 5.0 Field Form Quantitative Rating INENT- DELAWARE Rater(s): BAO JAC Metric 1. Wetland Area (size). Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (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) Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. subtotal 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) 0 VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) intensity of surrounding land use. Select one or double check and average. 2b. 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) Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. High pH groundwater (5) 100 year floodplain (1) Other groundwater (3) Between stream/lake and other human use (1) Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Seasonai/Intermittent surface water (3) Part of riparian or upland corridor (1) Perenniai surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbi check. 3c. Maximum water depth. Select only one and assign score. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) Check all disturbances observed Recovered (7) **∠**ditch point source (nonstormwater) Recovering (3) tile . filling/grading Recent or no recovery (1) dike road bed/RR track weir dredging Row stormwater input Metric 4. Habitat Alteration and Development. 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) 2 Poor to fair (2) Poor (1) Habitat alteration. Score one or double check and average 4c. None or none apparent (9) Check all disturbances observed shrub/sapiing removai Recovered (6) **y** mowing Recovering (3) grazing herbaceous/aquatic bed removai Recent or no recovery (1) clearcutting sedlmentation selective cutting dredging woody debris removai farming toxic pollutants nutrient enrichment iast revised 1 February 2001 jjm

Site: AEP TRENT- DELAWARE Rater	(s): BA	D. JAC	Date: 10/21/12
Metric 5. Special Wetlan  Metric 5. Special Wetlan  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-Lake Erie coastal/tributary wetland-Lake Plain Sand Prairies (Oak Open Relict Wet Prairies (10)  Known occurrence state/federal three Significant migratory songbird/water	unrestricted hydronings) (10) eatened or endafowl habitat or	logy (5) angered species (10) usage (10)	Date: 10/21/12
Category 1 Wetland. See Question  Metric 6. Plant commun		=	pography.
max 20 pts. subtotal 6a. Wetland Vegetation Communities.	Vegetation	Community Cover Scale	
Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	471 acres) contiguous area
Aquatic bed	1	Present and either comprises sm	all part of wetland's
\ Emergent		vegetation and is of moderate of	uality, or comprises a
2 Shrub		significant part but is of low qua	lity
Forest	2	Present and either comprises sign	nificant part of wetland's
Mudflats		vegetation and is of moderate of	uality or comprises a small
Open water		part and Is of high quality	(a)
Other	3	Present and comprises significan	t part or more of wellendle
6b. horizontal (plan view) Interspersion.		vegetation and is of high quality	, part, or more, or wettands
Select only one.		vogetation and is of high quality	
High (5)	Narrative D	escription of Vegetation Quality	
Moderately high(4)	low	Low spp diversity and/or predomin	
Moderate (3)	1044	disturbance tolerant native and	nance of nonnative or
Moderately low (2)	mod	disturbance tolerant native spec	iles 🔄
Low (1)	mou	Native spp are dominant component	ant of the vegetation,
None (0)		aithough nonnative and/or distu	rbance tolerant native spp
6c. Coverage of invasive plants. Refer		can also be present, and specie	s diversity moderate to
to Table 1 ORAM long form for list. Add		moderately high, but generally v	v/o presence of rare
or deduct points for coverage	- Link	threatened or endangered spp	33/13
Extensive >75% cover (-5)	high	A predominance of native species	, with nonnative spp
Moderate 25-75% cover (-3)		and/or disturbance tolerant nativ	e spp absent or virtually
		absent, and high spp diversity a	nd often, but not always,
Sparse 5-25% cover (-1)		the presence of rare, threatened	i, or endangered spp
Nearly absent <5% cover (0)		_	
Absent (1)		Open Water Class Quality	
6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	
Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88	acres)
Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	
Standing dead >25cm (10ln) dbh			<del></del>
Amphibian breeding pools	Microtopogr	aphy Cover Scale	
	0	Absent	
	1	Present very small amounts or if m	iore common
_ 1		of marginal quality	
IT L	2	Present in moderate amounts, but	not of highest
1.1		quality or in small amounts of hig	hest quality
	3	Present in moderate or greater am	
T. I		and of highest quality	· ·
1 444 4 1			

Site: At P 7	NENT - DELAWARE	Batarla): BRO-1		D-4 () (
Site. HEP 1.	Il CNI DE CHARICE	Rater(s): BRO.J.	ne.	Date: 12/20/10
1 1	Metric 1. Wetland	Area (size).		
max 6 pts. subtotal	Select one size class and assign scc >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1 >0.1 to <0.3 acres (0.04 to < 0.1 acres (0.04ha) (0 pts)	) 20.2ha) (5 pts) Iha) (4 pts) a) (3 pts) .2ha) (2pts) :0.12ha) (1 pt)		•
2 3	Metric 2. Upland bu	iffers and surrour	nding land use	•
max 14 pts. subtotal	MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers  2b. Intensity of surrounding land use VERY LOW. 2nd growth of LOW. Old fleid (>10 years MODERATELY HIGH. Re	m (164ft) or more around wetlan 25m to <50m (82 to <164ft) aro e 10m to <25m (32ft to <82ft) ar average <10m (<32ft) around we	und perimeter (7) und wetland perimeter (4) round wetland perimeter (1) etland perimeter (0) nd average. wildlife area, etc. (7) with forest. (5) conservation tillage, new fai	
10 9	Metric 3. Hydrology			
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1)	apply.		ain (1) /iake and other human use (1)
	Seasonal/Intermittent surfal Perennial surface water (la 3c. Maximum water depth. Select or >0.7 (27.6ln) (3)	ke or stream) (5)	Part of riparian of 3d. Duration inundation/sa Semi- to perman	upland((e.g. forest), complex (1) or upland corridor (1) turation, Score one or dbi check nently inundated/saturated (4) ated/saturated (3)
	0.4 to 0.7m (15.7 to 27.6in) <ul> <li>0.4 to 0.7m (15.7 to 27.6in)</li> <li>&lt;0.4m (&lt;15.7in) (1)</li> </ul> 3e. Modifications to natural hydrolog <ul> <li>None or none apparent (12</li> </ul>	c reglme. Score one or double	check and average.	dated (2) rated injupper 30cm (12in) (1)
k	Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (no filling/grading road bed/RR tradredging other	ck
7.5 165	Metric 4. Habitat Al	teration and Deve	elopment.	
max 20 pts. subtotal	4a. Substrate disturbance. Score on None or none apparent (4)  Recovered (3)	e or double check and average.		
•	Ab. Habitat development. Select oni Excellent (7) Very good (6)	y one and assign score.		
	Good (5)  Moderately good (4)  Fair (3)  Poor to fair (2)  Poor (1)			
E	4c. Habitat alteration. Score one or  None or none apparent (9)  Recovered (6)  Recovering (3)  Recent or no recovery (1)	Check all disturbances obsermowing grazing clearcutting selective cutting	ved  shrub/sapling rei herbaceous/aqui sedimentation dredging	
July 15 subtotal this pa		> woody debris removal toxic pollutants	farming nutrient enrichm	ent
iast revised 1 Februa	ry 200 i gill			

ORAM v. 5.0 Field Form Quantitative Rating

W-BAD-12-2012-06

Site: AEP TRONT- DELAMARE Rater(	s): BA	o, SAC	Date: 12/20/18
subtotal first page  Metric 5. Special Wetland  Max 10 pts. subtotal Check all that apply and score as indicated.	ds.		
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erle coastal/tributary wetland-ur Lake Erie coastal/tributary wetland-re Lake Plain Sand Prairies (Oak Openi Relict Wet Prairies (10) Known occurrence state/federal threa Significant migratory songbird/water (1) Category 1 Wetland. See Question 1	estricted hydrolo ngs) (10) atened or enda fowl habitat or u I Qualitative Ra	ngered species (10) usage (10) ating (-10)	
A 195 Metric 6. Plant communi	ues, mu	erspersion, mic	orotopograpny.
max 20 pts. subtotal 6a. Wetland Vegetation Communities.	Vegetation (	Community Cover Scale	
Score all present using 0 to 3 scale.	0		ha (0.2471 acres) contiguous area
Aquatic bed	1		ises small part of wetland's
/ Emergent			derate quality, or comprises a
		significant part but is of	
A Shrub Forest	2		
the state of the s	2	The second control of	ises significant part of wetland's
Mudflats		The second secon	derate quality or comprises a small
Open water		part and is of high quali	
Other	3	Present and comprises si	gnificant part, or more, of wetland's
6b. horizontal (plan view) Interspersion.		vegetation and is of hig	h quality
Select only one.	-		
High (5)	Narrative De	escription of Vegetation Q	mality
Moderately high(4)	low		
	IOW		predominance of nonnative or
Moderate (3)		disturbance tolerant nat	
/ Moderately low (2)	mod		component of the vegetation,
/ \tow(1)		although nonnative and	/or disturbance tolerant native spp
None (0)		can aiso be present, an	d species diversity moderate to
6c. Coverage of invasive plants. Refer		moderately high, but ge	nerally w/o presence of rare
to Table 1 ORAM long form for list. Add		threatened or endanger	
or deduct points for coverage	high		species, with nonnative spp
Extensive >75% cover (-5)	'''g''		
Moderate 25-75% cover (-3)			rant native spp absent or virtually
			versity and often, but not always,
Sparse 5-25% cover (-1)		the presence of rare, th	reatened, or endangered spp
Nearly absent <5% cover (0)			
Absent (1)	Mudflat and	Open Water Class Quality	y
6d. Microtopography.	0	Absent < 0.1ha (0.247 ac	res)
Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to	2.47 acres)
Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47	
O Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or r	
Standing dead >25cm (10in) dbh		1gii ma (0,00 a0103) 01 1	
Amphibian breeding pools	Microtonos	ranhy Cayor Sania	
		aphy Cover Scale	
	0	Absent	
1	1	Present very small amour of marginal quality	
'AT L	2	Present in moderate amo	unts, but not of highest
III · ~		quality or in small amou	
	3	Present in moderate or gr	
AT. I		and of highest quality	
1 1907 F 1			

14.5

WETLAM 0.4 ORAM v. 5.0 Field Form Quantitative Rating

W-BAO-122012-07

	On Quantitative Nating	T=	
Site: Att	TRENT-DECAWARE	Rater(s): BAD, JAC	Date: /2/20/12
22	Metric 1. Wetland	Area (size).	
max 6 pts. subtota	>50 acres (>20.2ha) (6 pt 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10 3 to <10 acres (1.2 to <41    0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts)	s) 20.2ha) (5 pts) 1ha) (4 pts) a) (3 pts) 1.2ha) (2pts) <0.12ha) (1 pt)	
7 9	Metric 2. Upland b	uffers and surround	ding land use.
max 14 pts. subtotal	MEDIUM. Buffers average NARROW. Buffers average NARROW. Buffers average VERY NARROW. Buffers average NARROW. Buffers NARROW. Buffers NARROW. Buffers NARROW. Buffers NARROW. Buffers average NARROW. Buffers NARROW. Buffers NARROW. Buffers average NARROW. Buffers average NARROW. Buffers average NARROW. Buffers average NARROW. Buffers NARROW. Buffers average NARROW. Buffers average NARROW. Buffers N	Om (164ft) or more around wetland e 25m to <50m (82 to <164ft) arour ge 10m to <25m (32ft to <82ft) arou average <10m (<32ft) around wetle. Select one or double check and or older forest, prairie, savannah, we s), shrub land, young second growth	perimeter (7) and wetland perimeter (4) und wetland perimeter (1) and perimeter (0) average. idlife area, etc. (7) h forest. (5) servation tillage, new fallow field. (3)
12 21	Metric 3. Hydrolog		construction. (1)
max 30 pts. subtotal	3a. Sources of Water. Score all that	t apply.	b. Connectivity. Score all that apply.
	High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surf Perennial surface water (i 3c. Maximum water depth. Select (1) >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1)	ace water (3) ake or stream) (5) 30 only one and assign score.	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)  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)
,	3e. Modifications to natural hydrology None or none apparent (1 Recovered (7) Recovering (3) Recent or no recovery (1)	2) Check all disturbances observed ditch	
1.5 28.5	Metric 4. Habitat A	Iteration and Devel	opment.
max 20 pts. subtotal	4a. Substrate disturbance. Score of None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select or Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2)	)	
	4c. Habitat alteration. Score one o		
subtotal this	, -		shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment

UETLAND 7
ORAM v. 5.0 Field Form Quantitative Rating

N-BAD-122012-07

Site: Auf	TRENT-DECALDAME RE	iter(s): BAO	Vac	Date: 12/20/
28	.5			
subtotal (	<del></del>			
0 28	Metric 5. Special Wet	lands.		
max 10 pts. subt	olal Check all that apply and score as Indicate	ed.		
	Bog (10)			
	Fen (10) Old growth forest (10)			
	Mature forested wetland (5)			
	Lake Erle coastal/tributary wetl	and-unrestricted hydrolog	y (10)	
	Lake Erie coastal/tributary wetl Lake Plain Sand Prairies (Oak	and-restricted hydrology ( Openings) (10)	5)	
	Relict Wet Prairies (10)			
	Known occurrence state/federa	I threatened or endanger	ed species (10)	
	Significant migratory songbird/ Category 1 Wetland. See Que:	vater fowl habitat or usag	e (10) /-10)	
11 0.1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			an a ayar b
-4 24	5   Metric of Triant commi	unities, inters	persion, micrott	opograpny.
max 20 pts. subto	ou. Would regolation communities.	Vegetation Com	munity Cover Scale	
	Score all present using 0 to 3 scale.	0 Ab	sent or comprises <0.1ha (0.2	471 acres) contiguous a
	Aquatic bed    Emergent	1 Pre	esent and either comprises sm	all part of wetland's
	Shrub	s	egetation and is of moderate of ignificant part but is of low qua	lity or comprises a
	Forest	2 Pre	esent and either comprises sig	nificant part of wetland's
	Mudflats Open water	v	egetation and is of moderate of	quality or comprises a sn
	Other	3 Pre	art and is of high quality esent and comprises significan	t part or more of waller
	6b. horizontal (plan view) interspersion.	v	egetation and is of high quality	r pair, of more, of wellar
	Select only one.			
	High (5) Moderately high(4)	low Lov	ption of Vegetation Quality	
	Moderate (3)	d d	w spp diversity and/or predomli isturbance tolerant native spec	nance of nonnative or
	Moderately low (2)	mod Nat	tive spp are dominant compon	ent of the vegetation.
	Ø	а	Ithough nonnative and/or distu	rbance tolerant native s
	6c. Coverage of invasive plants. Refer	Ci	an also be present, and specle noderately high, but generally v	s diversity moderate to
	to Table 1 ORAM long form for list. Add	th	reatened or endangered spp	
	or deduct points for coverage  Extensive >75% cover (-5)	high A p	redominance of native species	, with nonnative spp
	Moderate 25-75% cover (-3)	ai	nd/or disturbance tolerant nativ bsent, and high spp diversity a	e spp absent or virtually
	Sparse 5-25% cover (-1)	th	e presence of rare, threatened	nd oiten, but not always I. or endangered son
	Nearly absent <5% cover (0)			
	Absent (1) 6d. Microtopography.		n Water Class Quality sent <0.1ha (0.247 acres)	
	Score all present using 0 to 3 scale.		0.1 to <1ha (0.247 to 2.47 ac	res)
	Vegetated hummucks/tussucks	2 Mod	derate 1 to <4ha (2.47 to 9.88	
	O Coarse woody debris >15cm (6i Standing dead >25cm (10in) dbl		h 4ha (9.88 acres) or more	
	Amphibian breeding pools	Microtopography	Cover Scale	
		0 Abs		
		1 Pres	sent very small amounts or if marginal quality	nore common
-1.		2 Pres	sent In moderate amounts, but	not of highest
1,1			rality or In small amounts of hig	
24		1	sent in moderate or greater am id of highest quality	ounts
24.5			a or nightest quality	

Site:	4EP 7	RENT-DER	AUARE	Rater(s):	BAD, JAC		Date: /2/20/12
2	2	Metric 1.	Wetland A	rea (size)			,
max 6 pts.	subtolal	>50 a 25 to 10 to 3 to < 0.3 to	ciass and assign scor cres (>20.2ha) (6 pts) <50 acres (10.1 to <2) <25 acres (4 to <10.1 10 acres (1.2 to <4ha <3 acres (0.12 to <1.3 <0.3 acres (0.04 to <1.3 cres (0.04ha) (0 pts)	0.2ha) (5 pts) ha) (4 pts) ) (3 pts) 2ha) (2pts)			
8	10	Metric 2.	Upland bu	ffers and	surroundi	ing land use.	
max 14 pts.	subtotal	WIDE.  WEDIL  NARR  VERY  2b. Intensity of s  VERY  LOW.  MODE	OW. Buffers average NARROW. Buffers a surrounding land use. LOW. 2nd growth or Old field (>10 years)	n (164ft) or more 25m to <50m (82 e 10m to <25m (3 everage <10m (<3 Select one or d older forest, prai , shrub land, your idential, fenced p	around wetland pe to <164ft) around 32ft to <82ft) aroun 12ft) around wetlan ouble check and a rie, savannah, wild ig second growth f asture, park, consi	wrimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) werage. life area, etc. (7) orest. (5) ervation tillage, new failo	ow fieid. (3)
15	25	1	Hydrology	•		Silvardousin (1)	
max 30 pts.	subtotal	High p Other Precip Seaso Pereni 3c. Maximum wa -0.7 (2 0.4 to -0.4 to -0.4 to -0.4 to	Vater. Score ail that a H groundwater (5) groundwater (3) Itation (1) nal/intermittent surface hala surface water (lakater depth. Select oni 17.6in) (3) 0.7m (15.7 to 27.6in) (<15.7in) (1) s to natural hydrologic	ee water (3) ee or stream) (5) ly one and assigr	3d. score.	Part of wetland/up Part of riparian or Duration inundation/sate Seml- to permane Regularly inundat Seasonally inundat Seasonally satura	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbi check, ently inundated/saturated (4) ted/saturated (3)
		None of Recovery	or none apparent (12) ered (7) ering (3) t or no recovery (1)		bances observed	point source (non filling/grading road bed/RR track dredging other row)	i i
1.5	32.5	Metric 4.	Habitat Alt	eration a	nd Develo	pment.	
max 20 pts.	subtotal	None of Recover Recover Recent Recent Paper Service Recent Paper Service Recent	ood (6) (5) ately good (4)				
		Fair (3  X Poor to Poor (  4c. Habitat alter	fair (2)	ouble check and	average.		
	32.5	None of Recover Recove	or none apparent (9) ered (6) ering (3) t or no recovery (1)	Check all distumowing grazing clearcutti	rbances observed  ng cutting ebris removal	shrub/sapiing rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

ORAM v. 5.0 Field Form Quantitative Rating

W-BAD-122012-08

Site: AEP TRONT-DELAWARE Rater	(s): /3/k	D, JAC	Date: 12/20/12
subtotal first page  O 32.5 Metric 5. Special Wetlan	ıds.		
max 10 pts. subtotal Check all that apply and score as Indicated.  Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland-Lake Erie coastal/tributary wetland-Lake Plain Sand Prairies (Oak Oper Relict Wet Prairies (10) Known occurrence state/federal thre Significant migratory songbird/water	estricted hydro ings) (10) atened or end	ology (5) angered species (10)	
Category 1 Wetland. See Question	1 Qualitative F	Rating (-10)	Mography
max 20 pts. subtotal  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	Vegetation 0 1	Community Cover Scale  Absent or comprises <0.1ha (0.2²  Present and either comprises smay vegetation and is of moderate question in the significant part but is of low quality.  Present and either comprises significant part but is of moderate question and is of moderate question and is of moderate question and is of high quality.  Present and comprises significant vegetation and is of high quality.  Escription of Vegetation Quality.  Low spp diversity and/or predoming disturbance tolerant native special into the special part of the species and so be present, and species moderately high, but generally with the species and so the species and species moderately high, but generally with reatened or endangered spp	area all part of wetland's uality, or comprises a lity allity or comprises a small area, or more, of wetland's uality or comprises a small apart, or more, of wetland's apart, or more, of wetland's apart, or more to expense of the vegetation, apart of the vegetation apart of the
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 hummucks/tussucks  Coarse woody debris >15cm (6in)  Standing dead >25cm (10in) dbh  Amphiblan breeding pools	0 1 2 3	A predominance of native species, and/or disturbance tolerant native absent, and high spp diversity and the presence of rare, threatened  Open Water Class Quality  Absent <0.1ha (0.247 acres)  Low 0.1 to <1ha (0.247 to 2.47 acres)  Moderate 1 to <4ha (2.47 to 9.88 and High 4ha (9.88 acres) or more  aphy Cover Scale  Absent  Present very small amounts or if more of marginal quality  Present in moderate amounts, but in quality or in small amounts of highest quality	e spp absent or virtually nd often, but not always, , or endangered spp  es) acres)  ore common  not of highest hest quality

1	161	ZA	ND	99 Quantitative	
RÁM v	. 5.0	Field	Form	Quantitative	Rating

W-BAD-122012-10

Site:	AEPT	RENT- DELAWARE	Rater(s):	BAD, VAC	Date: 12/20/12
2	2	Metric 1. Wetland A	rea (size)	).	
max 6 pts.	subtotal	Select one size class and assign scol	0.2ha) (5 pts) ha) (4 pts) ) (3 pts) 2ha) (2pts) 0.12ha) (1 pt)		
7	9	Metric 2. Upland bu	ffers and	surrounding I	and use.
nax 14 pts.	subtotal	2a. Calculate average buffer width. \$ WIDE. Buffers average 50i MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. 2nd growth or LOW. Old field (>10 years) MODERATELY HIGH. Res HIGH. Urban, industrial, op	m (164ft) or more 25m to <50m (8: e 10m to <25m (6: everage <10m (< Select one or or older forest, pra , shrub land, you lidential, fenced	e around wetland perimeter 2 to <164ft) around wetland 32ft to <82ft) around wetland 32ft) around wetland perim double check and average. irie, savannah, wildlife areing second growth forest. (pasture, park, conservation	(7) I perimeter (4) Ind perimeter (1) Indeter (0) Indeter (0) Indeter (7) Indeter (7) Indeter (8) Indeter (9) Indeter (1) Indeter (1) Indeter (1) Indeter (2) Indeter (2) Indeter (3) Indeter (4) Indeter (6) Indeter (6) Indeter (7) Indeter (7) Indeter (8) Indeter (9) Inde
14	23	Metric 3. Hydrology	• · · · · · · · · · · · · · · · · · · ·	., ., .,	
nax 30 pts.	subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfar Perennial surface water (lat 3c. Maximum water depth. Select on >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)    3e. Modifications to natural hydrologi   None or none apparent (12   Recovered (7)   Recovering (3)   Recent or no recovery (1)	ce water (3) (e or stream) (5) ly one and assig (2) c regime. Score	3d. Duration score.  3d. Duration score.  3 one or double check and authorized surbances observed	ctivity. 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)  on inundation/saturation. Score one or dbi check.  Semi- to permanently inundated/saturated (4)  Regularly inundated/saturated (3)  Seasonally inundated (2)  Seasonally saturated in upper 30cm (12in) (1)  average.  point source (nonstormwater)  filling/grading road bed/RR track  dredging  the source of the source (nonstormwater)  filling/grading road bed/RR track  dredging  tother
10	33	Metric 4. Habitat Al			
nax 20 pts.	subtotal	4a. Substrate disturbance. Score on None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)  Habitat development. Select only Excellent (7)  Very good (6)  Good (5)  Moderately good (4)  Fair (3)  Poor to fair (2)  Poor (1)  4c. Habitat alteration. Score one or one or one apparent (9)  Recovered (6)	one and assign	score.  d average.  urbances observed	shrub/sapling removal
	33 subtotal this p	Recovering (3) Recent or no recovery (1)	grazing clearcut selective woody clearcut toxic po	ting e cutting lebris removal	nerbaceous/aquatic bed removal sedimentation dredging arming nutrient enrichment

ORAM v. 5.0 Field Form Quantitative Rating

W-BAD-102012-10

Site: Atp Tre	NT- DELAWARE	Rater(s): BA	0 JAC	Date: /2/20/12
0 25	heck all that apply and score as inc.  Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (8)	licated.		
	Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies ( Relict Wet Prairies (10) Known occurrence state/fe Significant migratory song Category 1 Wetland. See	wetland-unrestricted hy wetland-restricted hydro Oak Openings) (10) ederal threatened or end bird/water fowl habitat o	ology (5) langered species (10) r usage (10)	
2 35	letric 6. Plant con			icrotopography.
	a. Wetland Vegetation Communitie	s. Vegetation	Community Cover Scale	
Sc	core all present using 0 to 3 scale.	0		0.1ha (0.2471 acres) contiguous area
. 5	Aquatic bed Emergent Shrub	1		prises small part of wetland's noderate quality, or comprises a of low quality
2	Forest	. 2		prises significant part of wetland's
ā	Mudflats		vegetation and is of m	noderate quality or comprises a small
	Open water		part and is of high qua	
6b	Other  o. horizontal (plan view) interspers	3 ion.	Present and comprises vegetation and is of h	significant part, or more, of wetland's lgh quality
Se	elect only one.			1
	High (5)		Description of Vegetation	
	Moderately high(4) Moderate (3)	low		r predominance of nonnative or
5		mod	disturbance tolerant n	ative species at component of the vegetation,
	Low (1)			nd/or disturbance tolerant native spp
	None (0)		can also be present, a	and species diversity moderate to
	<ul> <li>Coverage of Invasive plants. Re Table 1 ORAM long form for list.</li> </ul>		moderately high, but of	generally w/o presence of rare
	deduct points for coverage	hlgh	threatened or endang	erea sppve species, with nonnative spp
	Extensive >75% cover (-5)			erant native spp absent or virtually
	Moderate 25-75% cover (-			diversity and often, but not always,
25				threatened, or endangered spp
	Nearly absent <5% cover ( Absent (1)		d On an Water Olay   0   1	
6d	I. Microtopography.	0	Absent <0.1ha (0.247 a	
	core all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247	
	Vegetated hummucks/tuss		Moderate 1 to <4ha (2.4	47 to 9.88 acres)
र्द	Coarse woody debris >150		High 4ha (9.88 acres) or	r more
ť	Standing dead >25cm (10i	•	aranhy Cover Seels	
	varipalisation of security pools	0	graphy Cover Scale Absent	
		1	Present very small amor	unts or if more common
T. 2		2		ounts, but not of highest ounts of highest quality
		3	Present in moderate or	
1			and of highest quality.	

CA



Site: APP-	TRENT- DEZADARE	Rater(s): BAO VAC	Date: /2/20/12
77(.)	7 00.5.	11.0.(0): 79.70 (77	- Dutc. 10/20/10
1 1	Metric 1. Wetland A	rea (size).	
max 6 pts. subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1 >0.1 to <0.3 acres (0.04 to < <1.1 acres (0.04ha) (0 pts)	) (0.2ha) (5 pts) ha) (4 pts) ı) (3 pts) 2ha) (2pts) (0.12ha) (1 pt)	
4 5	Metric 2. Upland bu	ffers and surroundi	ng land use.
max 14 pts. subtotal	MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers  2b. Intensity of surrounding land use VERY LOW. 2nd growth o LOW. Old field (>10 years MODERATELY HIGH. Re	m (164ft) or more around wetland per 25m to <50m (82 to <164ft) around ver e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetland	rimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) verage. ife area, etc. (7) orest. (5) veration tillage, new fallow field. (3)
8 13	Metric 3. Hydrology		
		· · · · · · · · · · · · · · · · · · ·	<u>.</u>
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfal Perennial surface water (late 1) 3c. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrology None or none apparent (12) Recovered (7) Recovering (3)	ce water (3) ke or stream) (5) ly one and assign score.	point source (nonstormwater)
	Recent or no recovery (1)	dike	filling/grading road bed/RR track
		weir stormwater input	dredging yother_/Cow
1.5 20.5	Metric 4. Habitat Al	teration and Develo	
max 20 pts. subtotal	4a. Substrate disturbance. Score on None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)	e or double check and average.	
	4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5)	y one and assign score.	
	Moderately good (4) Fair (3) Poor to fair (2) Poor (1)		
subtotal this p	4c. Habitat alteration. Score one or  None or none apparent (9)  Recovered (6)  Recovering (3)  Recent or no recovery (1)		shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment

WETZAND 10
ORAM v. 5.0 Field Form Quantitative Rating

W-BAD-122012-09

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

CAT.1



End of Quantitative Rating. Complete Categorization Worksheets.

quality or in small amounts of highest quality
Present in moderate or greater amounts

and of highest quality

WETLANI	> U Form Quantitative Rating	11. 400 D2012 AT	
		W- BAD. B2212 01	Data
Site: AEP TO	Rater(s):	BAO, VAC	Date: /2/20/12
max 6 pts. subtotal	Metric 1. Wetland Area (size	∍).	
	>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)		
	Metric 2. Upland buffers and	d surrounding land (	use.
max 14 pts. subtotal	2a. Calculate average buffer width. Select only one WIDE. Buffers average 50m (164ft) or mo MEDIUM. Buffers average 25m to <50m ( NARROW. Buffers average 10m to <25m VERY NARROW. Buffers average <10m VERY LOW. Buffers average <10m VERY LOW. 2nd growth or older forest, p LOW. Old field (>10 years), shrub land, you MODERATELY HIGH. Residential, fenced HIGH. Urban, Industrial, open pasture, row	ore around wetland perimeter (7) (82 to <164ft) around wetland perimeter (32ft to <82ft) around wetland perimeter (32ft) around wetland perimeter (0) r double check and average. rairie, savannah, wildlife area, etc. (7) bung second growth forest. (5) d pasture, park, conservation tillage, r	er (4) eter (1)
9 9	Metric 3. Hydrology.		
max 30 pts. subtotal	3a. Sources of Water. Score all that apply.  High pH groundwater (5)  Other groundwater (3)  Precipitation (1)  Seasonal/intermittent surface water (3)  Perennial surface water (lake or stream) (5)  3c. Maximum water depth. Select only one and ass  >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 (12)  None or none apparent (12)  Check all discordance (12)	Between Part of we Part of rip  5)  3d. Duration inunda  slign score.  Regularly Seasonall Seasonall seasonali re one or double check and average.	floodplain (1) stream/lake and other human use (1) stream/lake and other human use (1) stland/upland (e.g. forest), complex (1 arian or upland corridor (1) tion/saturation. Score one or dbi checoermanently inundated/saturated (4) inundated/saturated (3) ly inundated (2) ly saturated in upper 30cm (12in) (1)
	Recovered (7) Recovering (3) Recent or no recovery (1)  Recovering (3) Recent or no recovery (1)		
6.5 15.5	Metric 4. Habitat Alteration	and Development.	
max 20 pts. subtotal	4a. Substrate disturbance. Score one or double che None or none apparent (4) Recovered (3) Recent or no recovery (1)  4b. Habitat development. Select only one and assist Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3)		

subtotal this page
last revised 1 February 2001 jjm

Poor to fair (2) Poor (1)

Recovered (6)

Recovering (3)
Recent or no recovery (1)

None or none apparent (9)

4c. Habitat alteration. Score one or double check and average.

Check all disturbances observed

grazing clearcutting selective cutting woody debris removal

toxic poliutants

mowing

shrub/sapling removal herbaceous/aquatic bed removal

sedimentation dredging

farming nutrient enrichment

10-510-5010-01

Site: A	P Men	- DEZAWARE	Rater(s): 8	AD, VAC	Date: /a/20/12
subi	/S. 5	Natria E Spacial \A	lation de		
	15,5	letric 5. Special W	retiands.		
max 10 pts.	subtotal Ch	Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary Lake Plain Sand Prairies (10) Relict Wet Prairies (10)	i) wetland-unrestricted wetland-restricted h Dak Openings) (10)	ydrology (5)	
		Known occurrence state/fe	deral threatened or e	endangered species (10)	
		Significant migratory songt	Question 1 Qualitativ	it or usage (10) /e Rating (-10)	
3	18.5 M				microtopography.
max 20 pts.		Wetland Vegetation Communities	s. Vegetat	ion Community Cover S	
	Sco	ore all present using 0 to 3 scale.  Aquatic bed	0	Absent or comprise	es <0.1ha (0.2471 acres) contiguous area
		Emergent	1	Present and either	comprises small part of wetland's
		Shrub		significant part by	of moderate quality, or comprises a ut is of low quality
	2	Forest	2	Present and either	comprises significant part of wetland's
		Mudflats		vegetation and is	of moderate quality or comprises a small
		Open water		part and is of hig	h quality
	6b	horizontal (plan view) Interspersion	_ 3	Present and compr	ises significant part, or more, of wetland's
		ect only one.	J	vegetation and is	of high quality
		High (5)	Narrativ	e Description of Vegeta	tion Quality
		Moderately high(4)	low	Low spp diversity a	and/or predominance of nonnative or
	0	Moderate (3)		disturbance tolera	ant native species
	U	Moderately low (2) Low (1)	mod	Native spp are dom	inant component of the vegetation,
		V None (0)		although nonnativ	/e and/or disturbance tolerant native spp
	6c.	Coverage of invasive plants. Refe	er	moderately high	ent, and species diversity moderate to but generally w/o presence of rare
	to T	able 1 ORAM long form for list. A	dd	threatened or end	langered spp
	or d	educt points for coverage	high	A predominance of	native species, with nonnative spp
	,	Extensive >75% cover (-5) Moderate 25-75% cover (-3)		and/or disturbanc	e tolerant native spp absent or virtually
	_	Sparse 5-25% cover (-1)	)	absent, and high	spp diversity and often, but not always,
	·	Nearly absent <5% cover (0	)	une presence of ra	are, threatened, or endangered spp
		Absent (1)		and Open Water Class C	Quality
		Microtopography.	0	Absent <0.1ha (0.2	47 acres)
	500	re all present using 0 to 3 scale.      Vegetated hummucks/tussu	1	Low 0.1 to <1ha (0.	247 to 2.47 acres)
	7	Coarse woody debris >15cn		Moderate 1 to <4ha	(2.47 to 9.88 acres)
	0	Standing dead >25cm (10in	) dbh	High 4ha (9.88 acre	s) or more
		Amphibian breeding pools		ography Cover Scale	
			0	Absent	
			1	Present very small a	amounts or if more common
1			2	of marginal quality	
# /F			2	quality or in small	amounts, but not of highest amounts of highest quality
			3	Present in moderate	or greater amounts
100			_	and of highest qua	
(C. 61					

(NE7 ORAM v. 5.0 F	TLAND Field Form	Quantitative Rating		C	V-13/10-1220 12-62	
Site: AE	PTHEN	T-DEZAWARE	Rater(s): Bi	90, JAC	Date: /a/a	20/12
max 6 pts. s	1	letric 1. Wetland A  lect one size class and assign scc  >50 acres (>20.2ha) (6 pts  25 to <50 acres (10.1 to 10 to <25 acres (4 to <10.1 to </  3 to <10 acres (1.2 to <4ha  0.3 to <3 acres (0.12 to <1  0.1 to <0.3 acres (0.04 to <10.1 to <0.1 acres (1.2 to <4ha  0.3 to <3 acres (0.12 to <1</td <td>ore. (5) 20.2ha) (5 pts) 1ha) (4 pts) (3 pts) (2ha) (2pts) &lt;0.12ha) (1 pt)</td> <td></td> <td></td> <td></td>	ore. (5) 20.2ha) (5 pts) 1ha) (4 pts) (3 pts) (2ha) (2pts) <0.12ha) (1 pt)			
4	5 M	<0.1 acres (0.04ha) (0 pts)		urrounding	land use.	
max 14 pls. st	2a. / 2b. 3	VERY LOW. 2nd growth of LOW. Old field (>10 years	om (164ft) or more arc 2 25m to <50m (82 to 19 10m to <25m (32ft average <10m (<32ft 5. Select one or doub 10 or older forest, prairie, 10), shrub land, young s 11 sidential, fenced past	eund wetland perime <164ft) around wetlat to <82ft) around wet ) around wetland per olle check and average savannah, wildlife a second growth forest ure, park, conservati	ter (7) and perimeter (4) tland perimeter (1) rimeter (0) ge. irea, etc. (7) t. (5) lon tiliage, new fallow field. (3)	
15 6	20 M	etric 3. Hydrology				
		Sources of Water. Score all that High pH groundwater (5)	apply.	3b. Con	nectivity. Score all that apply.	
	ı	Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) .<0.4m (<15.7in) (1)	ke or stream) (5) nly one and assign so ) (2)	ore. 3d. Dura	Between stream/lake and other hum Yeart of wetland/upland (e.g. forest), Part of riparian or upland corridor (1) Ition Inundation/saturation. Score one Semi- to permanently Inundated/satur Regularly inundated/saturated (3) Seasonally Inundated (2) Seasonally saturated in upper 30cm	complex ) or dbl cl urated (4
	5 	Modifications to natural hydrolog  None or none apparent (12  Recovered (7)  Recovering (3)  Recent or no recovery (1)		nces observed	point source (nonstormwater) filling/grading road bed/RR track dredging other	
10.5 2	30.5 M	letric 4. Habitat Al	teration and	d Developn	nent.	
	4a. 75. 4b.	Recent or no recovery (1) Habitat development. Select onl Excellent (7) Very good (6)	y one and assign sco	re.		
٦	3	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturba mowing grazing clearcutting selective cut	nces observed	shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging	
Subtot	05 al this page		woody debri		farming nutrient enrichment	

last revised 1 February 2001 jjm

Site:	AEP	Form Quantitative Ra		Rater(s):	BAD.	JAC	Date: 12/20/12
Site.	HEP	MENT- DELHOS	7100	110000	1011-1		
	76						
	130.	7					
	subtotal fire						
	7	Metric 5.	Special	Wetlands			
- 入力	130.	চ	•				
max 10 pts	. subto			s Indicated.			
		Bog (10					
		Fen (10	wth forest (10)				
		Mature	forested wetla	nd (5)			
		Lake E	rie coastal/tribu	itary wetland-unre	stricted hydro	ology (10)	
				itary wetland-restri		gy (5)	
			iain Sand Praii Vet Prairies (1	ies (Oak Openings	3) (10)		
		Known	occurrence st	ate/federal threater	ned or endar	ngered species (10)	)
		Signific	ant migratory	songbird/water fow	i habitat or u	sage (10)	
				See Question 1 Q			
1.1	1,,,	Metric 6.	Plant c	ommuniti	es, inte	erspersion	, microtopography.
1 11	141,	5					
max 20 pt	s. subto			_		Community Cover	Scale
		Score all present		cale	0 		ses <0.1ha (0.2471 acres) contiguous area r comprises small part of wetland's
		Aquation Q Emerg			'	1.	is of moderate quality, or comprises a
		5 3 Shrub	0.11	_			but is of low quality
		Forest		_	2		er comprises significant part of wetland's
		Mudfla				part and is of hi	is of moderate quality or comprises a small
		Open v	water	-	3		prises significant part, or more, of wetland's
		6b. horizontal (p	lan view) Inter	spersion.	Ū	L	is of high quality
		Select only one.	,				
		High (	•	!		escription of Vege	
			ately high(4)		low		and/or predominance of nonnative or erant native species
			ate (3) ately low (2)	•	mod		ominant component of the vegetation,
		Low (1	-			aithough nonna	ative and/or disturbance tolerant native spp
		None					esent, and species diversity moderate to
		6c. Coverage of					h, but generally w/o presence of rare endangered spp
		to Table 1 ORAN or deduct points	=	iist. Add	high		of native species, with nonnative spp
			sive >75% cov	er (-5)		and/or disturba	nce tolerant native spp absent or virtually
			ate 25-75% co			absent, and hig	gh spp diversity and often, but not always,
		, , ,	e 5-25% cover			the presence o	f rare, threatened, or endangered spp
		Abser	/ absent <5% (	cover (U)	Mudflat and	l Open Water Clas	s Quality
		6d. Microtopogr			0	Absent <0.1ha (	
		Score all preser	it using 0 to 3		1		(0.247 to 2.47 acres)
			ated hummuck		2		4ha (2.47 to 9.88 acres)
		U	e woody debri		3	High 4ha (9.88 a	cres) or more
		Stand	ing dead >25c ibian breeding		Microtopoa	raphy Cover Scale	9
		الوادة ، [ ح_ ]		F	0	Absent	
					1		all amounts or if more common
_						of marginal qui	ality rate amounts, but not of highest
II d					2	quality or in sm	rate amounts, out not or nignest hall amounts of highest quality
AT 0					3		rate or greater amounts
۸.						and of highest	

WETLAND 13
ORAM v. 5.0 Field Form Quantitative Rating

W-BAD-122012-03

Site:	AFP TI	RENT- DEZAWARE	Rater(s):	BAO, JAC	Date: /2/20/12
2	2	Metric 1. Wetland	d Area (size)	).	,
max 6 pts.	subtotal	Select one size class and assign >50 acres (>20.2ha) ( 25 to <50 acres (10.1 10 to <25 acres (4 to 3 to <10 acres (1.2 to 0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.00 <0.1 acres (0.04ha) (0.1 acres (0.0	6 pts) to <20.2ha) (5 pts) <10.1ha) (4 pts) <4ha) (3 pts) o <1.2ha) (2pts) i to <0.12ha) (1 pt) pts)	x ==	
4	6	Metric 2. Upland	buffers and	surrounding la	nd use.
max 14 pts.	subtotal	MEDIUM. Buffers ave NARROW. Buffers ave VERY NARROW. Buffers ave VERY NARROW. Buffers ave VERY LOW. 2nd grow LOW. Old field (>10 years) MODERATELY HIGH	e 50m (164ft) or more rage 25m to <50m (8) erage 25m to <50m (8) erage 10m to <25m (fers average <10m (< 1 use. Select one or ovith or older forest, praears), shrub land, you Residential, fenced	around wetland perimeter (7 2 to <164ft) around wetland p (32ft to <82ft) around wetland 32ft) around wetland perimet	7) verimeter (4) i perimeter (1) er (0) etc. (7)  llage, new fallow field. (3)
12	18	Metric 3. Hydrolo		oropping, mining, boriou doub	(1)
max 30 pts.	subtotal	3a. Sources of Water. Score al High pH groundwater Other groundwater (3) Precipitation (1) Seasonal/Intermittent Perennial surface wat 3c. Maximum water depth. Selection (3) 0.4 to 0.7m (15.7 to 2) 0.4m (<15.7in) (1) 3e. Modifications to natural hydrogeneral surface water (15.7in) (1) 3e. Modifications to natural hydrogeneral surface water (15.7in) (1) 3e.	surface water (3) er (lake or stream) (5) ect only one and assig 7.6in) (2) rologic regime. Score	JOBE  JEPA  JOBE  JOB  JOB	vity. Score all that apply. 0 year floodplain (1) tween stream/lake and other human use (1) it of wetiand/upland (e.g. forest), complex (1) int of riparian or upland corridor (1) inundation/saturation. Score one or dbi check. imi- to permanently inundated/saturated (4) egularly inundated/saturated (3) easonally lnundated (2) easonally saturated in upper 30cm (12in) (1) earage.
		None or none apparer Recovered (7) Recovering (3) Recent or no recovery	(1) ditch tile dike weir	po Sfilli Sroa dro	int source (nonstormwater) ng/grading ad bed/RR track edging ner
9.5	27.5	Metric 4. Habitat	Alteration a	and Developme	nt.
max 20 pts.	subtotal	4a. Substrate disturbance. Sco None or none apparer Recovered (3) Recovering (2) Recent or no recovery Ab. Habitat development. Select Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score or None or none apparer Recovered (6) Recovered (6) Recovering (3)	at (4)  (1)  It only one and assign  the or double check and assign  It (9)  Check all dist  mowing grazing	d average. urbances observed	rub/sapling removal rbaceous/aquatic bed removal dimentation
	27,5	Recent or no recover	★ selective	e cutting dro debris removal fai	amentation edging mlng trient enrichment

WETUMD 13
ORAM v. 5.0 Field Form Quantitative Rating

W-BAD122012-03

Site: ACP TRENT-DE>MUNDE Rater	(s): BAL	Date: 12/20/12
wubtotal first page  O 27.5  Metric 5. Special Wetlar  The check all that apply and score as Indicated.  Bog (10)	nds.	
Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erle coastal/tributary wetland- Lake Erle coastal/tributary wetland- Lake Plain Sand Prairies (Oak Open Relict Wet Prairies (10) Known occurrence state/federal thre Significant migratory songbird/water Category 1 Wetland. See Question	restricted hydro nings) (10) eatened or enda r fowl habitat or 1 Qualitative R	angered species (10) usage (10) ating (-10)
A 34.5 Metric 6. Plant commun	ities, int	erspersion, microtopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communities.	Vegetation	Community Cover Scale
Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
Aquatic bed	1	Present and either comprises small part of wetland's
2 Emergent	·	vegetation and is of moderate quality, or comprises a
		significant part but is of low quality
√ ⇒ Shrub Forest	2	
Mudflats	2	Present and either comprises significant part of wetland's
<b></b>		vegetation and is of moderate quality or comprises a small
Open water		part and is of high quality
Other	3	Present and comprises significant part, or more, of wetland's
<ol><li>6b. horizontal (plan view) Interspersion.</li></ol>		vegetation and is of high quality
Select only one.		
High (5)	Narrative Do	escription of Vegetation Quality
Moderately high(4)	low	Low spp diversity and/or predominance of nonnative or
[ ]		disturbance tolerant native species
Moderately low (2)	mod	Native spp are dominant component of the vegetation,
Low (1)	mod	of though population and the distribution of the vegetation,
None (0)		although nonnative and/or disturbance tolerant native spp
		can also be present, and species diversity moderate to
6c. Coverage of invasive plants. Refer		moderately high, but generally w/o presence of rare
to Table 1 ORAM long form for list. Add		threatened or endangered spp
or deduct points for coverage	high	A predominance of native species, with nonnative spp
Extensive >75% cover (-5)		and/or disturbance tolerant native spp absent or virtually
Moderate 25-75% cover (-3)		absent, and high spp diversity and often, but not always,
- 3 Sparse 5-25% cover (-1)		the presence of rare, threatened, or endangered spp
Nearly absent <5% cover (0)		, and an
Absent (1)	Mudflat and	Open Water Class Quality
6d. Microtopography.	0	Absent <0.1ha (0.247 acres)
Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acres)
// Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88 acres)
Goarse woody debris >15cm (6in)	3	
Standing dead >25cm (10in) dbh		High 4ha (9.88 acres) or more
a Amphibian breeding pools	Microtopogr	raphy Cover Scale
L O J antended by book		
	0	Absent
		Present very small amounts or if more common of marginal quality
A7. Z	2	Present in moderate amounts, but not of highest
1 + 4 -		quality or in small amounts of highest quality
	3	Present in moderate or greater amounts
1.2 [345]		and of highest quality

WETZAND14	
RAM v. 5.0 Field Form Quantitative	Rating

W-BAD-102010-04

Site:	12 -		n. lage	Rater(s):	BAD JAC	-	Data / > /-
oite:	/#EY_/	MONT-DEZ	HWHUE	ivaici(s).	שאנו שאנו	-	Date: 12/20/12
2	2	Metric	1. Wetland A	rea (size)			
max 6 pts.	subtotal	>5   25   10   31   > 0.:	ize class and assign sco i0 acres (>20.2ha) (6 pts) i to <50 acres (10.1 to <2 to <25 acres (4 to <10.1 to <10 acres (1.2 to <4ha 3 to <3 acres (0.12 to <1. 1 to <0.3 acres (0.04 to < 1.1 acres (0.04ha) (0 pts)	) 0.2ha) (5 pts) ha) (4 pts) ) (3 pts) 2ha) (2pts)			
4	6	Metric	2. Upland bu	ffers and	surroundi	ing land use.	
max 14 pts.	sublotal	W MI  I W VE  2b. Intensity  3 W LO  X MO	e average buffer width. SIDE. Buffers average 500 EDIUM. Buffers average ARROW. Buffers average RY NARROW. Buffers a of surrounding land use. ERY LOW. 2nd growth or DW. Old field (>10 years) DDERATELY HIGH. Res GH. Urban, industrial, or GIDERATELY HIGH.	m (164ft) or more 25m to <50m (82 e 10m to <25m (3 everage <10m (<3 Select one or do older forest, prain , shrub land, your sidential, fenced p	around wetland pe to <164ft) around 2ft to <82ft) around 2ft) around wetlan ouble check and a ie, savannah, wild g second growth t asture, park, cons	erimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) verage. life area, etc. (7) orest. (5) ervation tillage, new fall	
7	13	7	3. Hydrology	•			
max 30 pts.	subtotal	High	of Water. Score all that gh pH groundwater (5) her groundwater (3) ecipitation (1) assonal/intermittent surfaction and surface water (latin water depth. Select on 7 (27.6in) (3) to 0.7m (15.7 to 27.6in) .4m (<15.7in) (1) tions to natural hydrological products and surface water (15.7in) (1)	ce water (3) ke or stream) (5) ly one and assign (2)	3d. score.	Part of wetland/u Part of riparian of Duration inundation/sal Semi- to perman Regularly inundation/sal Seasonally inundation	ain (1) //ake and other human use (1) //ake and other human use (1) //pipland (e.g. forest), complex (1) // or upland corridor (1) // turation. Score one or dbi check. // intended/saturated (4) // intended/saturated (3)
		3 Re Re	ne or none apparent (12) covered (7) covering (3) cent or no recovery (1)	Check all distured ditch wire dike welr stormwate	bances observed	point source (not filling/grading road bed/RR traddredging other o	ck ,
7.5	20.5	Metric	4. Habitat Alf	teration a	nd Develo	pment.	
max 20 pts.	subtotal	4b. Habitat (	e disturbance. Score on the or none apparent (4) acovered (3) acovering (2) acent or no recovery (1) development. Select only acellent (7) and (5) acellent (7) acellent (8) acert (4) acert (4) acert (4) acert (5) acert (6) acert (7) acert		-		
		4c. Habitat a	oor (1) alteration. Score one or (				
	20.5	₹ Re Re Re	one or none apparent (9) acovered (6) acovering (3) accent or no recovery (1)	mowing grazing clearcutti	cutting bris removal	shrub/sapling rei herbaceous/aqui sedimentation dredging farming nutrient enrichmi	atic bed removal
	sublotal this pa d 1 Februa	age ary 2001 jjm		L			

USTUAND 14
ORAM v. 5.0 Field Form Quantitative Rating

W-BAD-122012-04

Site: At TheNT- DELAWARE	Rater(s): BAO	JAC	Date: 12/20/04
subtotal first page  O 20.5 Metric 5. Special \	Wetlands.		/
max 10 pts. subtotal Check all that apply and score as it	ndicated.		
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland Lake Erie coastal/tributar Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/ Significant migratory son	(5)  ry wetland-unrestricted hydrology  ry wetland-restricted hydrology  (Oak Openings) (10)  (federal threatened or endary  gbird/water fowl habitat or u	gy (5) ngered species (10) sage (10)	
Category 1 Wetland. Se	e Question 1 Qualitative Ra	ting (-10)	
1 21.0		erspersion, microtop	ography.
max 20 pts. subtotal 6a. Wetland Vegetation Communit	ies. <u>Vegetation C</u>	ommunity Cover Scale	4200
Score all present using 0 to 3 scale Aquatic bed	- 0	Absent or comprises <0.1ha (0.247	1 acres) contiguous area
a Emergent Shrub	, '	Present and either comprises small vegetation and is of moderate qua- significant part but is of low qualit	ality, or comprises a
Forest	2	Present and either comprises signif	icant part of wetland's
Mudflats		vegetation and is of moderate qua	lity or comprises a small
Open water Other		part and is of high quality	
6b. horizontal (plan view) Intersper	3	Present and comprises significant p	art, or more, of wetland's
Select only one.		vegetation and is of high quality	
High (5)	Narrative De	scription of Vegetation Quality	
Moderately high(4)	iow	Low spp diversity and/or predomina	nce of nonnative or
O Moderate (3) Moderately low (2)	mod	disturbance tolerant native specie	5
Low (1)	mod	Native spp are dominant componen although nonnative and/or disturb	t of the vegetation,
None (0)		can also be present, and species	diversity moderate to
6c. Coverage of invasive plants. R	efer	moderately high, but generally w/c	presence of rare
to Table 1 ORAM long form for list.		threatened or endangered spp	
or deduct points for coverage Extensive >75% cover (-5	high	A predominance of native species, v	vith nonnative spp
San Mariana or serv		and/or disturbance tolerant native absent, and high spp diversity and	spp absent or virtually
Sparse 5-25% cover (-1)	•	the presence of rare, threatened, of	orten, but not always, or endangered son
Nearly absent <5% cover			gorod opp
Absent (1) 6d. Microtopography.		Open Water Class Quality	····
Score all present using 0 to 3 scale.	0	Absent <0.1ha (0.247 acres)	<del></del>
	. <del></del>	Low 0.1 to <1ha (0.247 to 2.47 acres Moderate 1 to <4ha (2.47 to 9.88 ac	<u> </u>
∠ Coarse woody debris >15		High 4ha (9.88 acres) or more	163)
Standing dead >25cm (10	)in) dbh		<del></del>
Amphibian breeding pools		phy Cover Scale	
		Absent Present very small amounts or if mounts	2000
1	'	Present very small amounts or if mor of marginal quality	e common
r 1	2	Present in moderate amounts, but no	ot of highest
		quality or in small amounts of higher	est quality
	3	Present in moderate or greater amou	ints
$\gamma I \subset I$		and of highest quality	

21.5

WETLAND 15
RAM v. 5.0 Field Form Quantitative Rating

W-BAD-122012-05

	WIT - DEVALANT	Rater(s): BAO, JAC	Date: /2/20/12
2 2	Metric 1. Wetland	Area (size).	
max 6 pts. subtotal	Select one size class and assign so >50 acres (>20.2ha) (6 p	ts) <20.2ha) (5 pts) i.1ha) (4 pts) ha) (3 pts) :1.2ha) (2pts) o <0.12ha) (1 pt) s)	W Land ma
79	Metric 2. Upland b	uffers and surroun	ding land use.
max 14 pts. subtotal	MEDIUM. Buffers avera NARROW. Buffers avera VERY NARROW. Buffe 2b. Intensity of surrounding land u VERY LOW. 2nd growth LOW. Old field (>10 yee MODERATELY HIGH. I HIGH. Urban, industrial	50m (164ft) or more around weitange 25m to <50m (82 to <164ft) around age 10m to <25m (32ft to <82ft) are average <10m (<32ft to <82ft) around we se. Select one or double check are nor older forest, prairie, savannah, ars), shrub land, young second grovesidential, fenced pasture, park, or, open pasture, row cropping, minir	a perimeter (7) und wetland perimeter (4) ound wetland perimeter (1) stland perimeter (0) nd average. wildlife area, etc. (7) wth forest. (5) conservation tillage, new fallow field. (3)
7 1/e.	Metric 3. Hydrolog	у	
max 30 pts. subtotal		) urface water (3) (lake or stream) (5) t only one and assign score. 6in) (2) logic regime. Score one or double	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 comdor (1)  3d. Duration inundation/saturation. Score one or dbi check  Semi- to permanently inundated/saturated (4)  Regularly inundated/saturated (3)  Seasonally inundated (2)  Seasonally saturated in upper 30cm (12in) (1)  check and average.
•	None or none apparent Recovered (7) Recovering (3) Recent or no recovery	ditch tile_	point source (nonstormwater) filling/grading road bed/RR track dredging other
15 23.5	21	Alteration and Dev	
max 20 pts. subtote	None or none apparen Recovered (3) Recovering (2) Recent or no recovery  4b. Habitat development. Select Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	t (4) (1) t only one and assign score.	
	4c. Habitat alteration. Score or	nt (9) Check all disturbances obs	erved shrub/sapling removal
23.	Recovered (6) Recovering (3) Recent or no recovery	mowing grazing	herbaceous/aquatic bed removal sedimentation dredging
last revised 1 Fet	oruary 200 i jjili		

WETLAND15
ORAM v. 5.0 Field Form Quantitative Rating

W-BAD-122012-05

Site: /	THENT-DEZAWARE Rate	r(s): BAD	JAC Date: 12/20
2	3.5		
Ĺ			
subtot	al first page	_	
0 2	Metric 5. Special Wetla	nds.	
max 10 pts. su	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	l-unrestricted hyd	frology (10)
	Lake Erie coastal/tributary wetland		logy (5)
	Lake Plain Sand Prairies (Oak Operation Relict Wet Prairies (10)	enings) (10)	
	Known occurrence state/federal th	reatened or enda	angered species (10)
	Significant migratory songbird/wat	er fowl habitat or	usage (10)
	Category 1 Wetland. See Questio	n 1 Qualitative R	ating (-10)
	Metric 6 Plant commun		erspersion, microtopography.
-20		,	erepereren, meretepegraphy.
max 20 pts. su	blotal 6a. Wetland Vegetation Communities.	Vegetation	Community Cover Scale
	Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 acres) contiguous
	Aquatic bed Emergent	1	Present and either comprises small part of wetland's
	2 Emergent Shrub		vegetation and is of moderate quality, or comprises a
	Forest	2	significant part but is of low quality  Present and either comprises significant part of wetlan
	Mudflats	_	vegetation and is of moderate quality or comprises a
	Open water		part and is of high quality
	Other	3	Present and comprises significant part, or more, of wet
	6b. horizontal (plan view) Interspersion. Select only one.		vegetation and is of high quality
	High (5)	Narrative D	escription of Vegetation Quality
	Moderately high(4)	low	Low spp diversity and/or predominance of nonnative or
	Moderate (3)  Moderately low (2)		disturbance tolerant native species
		mod	Native spp are dominant component of the vegetation,
	Low (1) None (0)		although nonnative and/or disturbance tolerant native
	6c. Coverage of Invasive plants. Refer		can also be present, and species diversity moderate moderately high, but generally w/o presence of rare
	to Table 1 ORAM long form for list. Add		threatened or endangered spp
	or deduct points for coverage	high	A predominance of native species, with nonnative spp
	Extensive >75% cover (-5)		and/or disturbance tolerant native spp absent or virtu
	Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)		absent, and high spp diversity and often, but not always
	Nearly absent <5% cover (0)		the presence of rare, threatened, or endangered spp
	Absent (1)	Mudflat and	Open Water Class Quality
	6d. Microtopography.	0	Absent <0.1ha (0.247 acres)
	Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acres)
	/ Vegetated hummucks/tussucks / Coarse woody debris >15cm (6in)	2	Moderate 1 to <4ha (2.47 to 9.88 acres)
	Standing dead >25cm (10in) dbh	3	High 4ha (9.88 acres) or more
	Amphibian breeding pools	Microtopogi	raphy 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
-1			quality or in small amounts of bighest quality
21.5		3	quality or in small amounts of highest quality  Present in moderate or greater amounts

DRAM V. 5.	0 Field F	orm Quantitative Ra	ting	$\ell$	1- BAD-1219 12.	/6
Site: A	EP 71	PENT- DEZAN	ARE.	Rater(s): B	40,140	Date: /2/19/12
max 6 pts.	Subtotal	25 to <50 10 to <29 3 to <10 0.3 to <3 0.1 to <0	ss and assign scores (>20.2ha) (6 pts) 0 acres (10.1 to <25 acres (4 to <10.1 acres (1.2 to <4ha 1 acres (0.12 to <1.3 acres (0.04 to <	re. ) (0.2ha) (5 pts) ha) (4 pts) () (3 pts) (.2ha) (2pts)		
max 14 pls.	sublotal	Metric 2.		offers and sur	•	
		0 NARROW 2b. Intensity of sur VERY LOW. OI MODERA	Buffers average 50il. Buffers average W. Buffers average ARROW. Buffers a rounding land use. DW. 2nd growth oud id field (>10 years) ATELY HIGH. Res rban, Industrial, op	m (164ft) or more aroun 25m to <50m (82 to <10 e 10m to <25m (32ft to average <10m (<32ft) a Select one or double or older forest, prairie, sa ships around second	d wetland perimeter (7) 4ft) around wetland per 82ft) around wetland pound wetland perimete check and average, vannah, wildlife area, e and growth forest. (5) park, conservation tilli	) erimeter (4) perimeter (1) er (0) etc. (7) age, new fallow field. (3)
9	10	Metric 3. I	Hydrology	<b>'.</b>		@
max 30 pts.	subtotal	Other group Precipitation Seasonal Perennial Sc. Maximum wate >0.7 (27.4 0.4 to 0.7 ><0.4 tm (<	groundwater (5) bundwater (3) ion (1) Vintermittent surfac I surface water (lah r depth. Select on 6in) (3) m (15.7 to 27.6in) 15.7in) (1)	ce water (3) ke or stream) (5) aly one and assign score	3d. Duration Ir	ity. Score all that apply. I year floodplain (1) I ween stream/lake and other human use (1) I to f wetland/upland (e.g. forest), complex (1) I to f riparian or upland corridor (1) I nundation/saturation. Score one or dbl check. Ini- to permanently inundated/saturated (4) I nundated/saturated (3) I sonally inundated (2) I sonally saturated in upper 30cm (12in) (1) I rage.
<del></del>	É	Recoverer Recovering Recent of	ng (3) r no recovery (1)	Check all disturbance ditch tile dike weir stormwater input	poin fillin roac drec othe	7,000

4a.	Substrate disturbance. Score one or double check and average.
	None or none apparent (4)
	Recovered (3)
2	Recovering (2)
	Recent or no recovery (1)
4b.	Habitat development. Select only one and assign score.
	Excellent (7)
	Very good (6)
	Good (5)
3	Moderately good (4)
	Fair (3)
	Poor to fair (2)
	Poor (1)
4.	
4C.	Habitat alteration. Score one or double check and average.
	None or pape apparent (0) Chook all disturbances about

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

$\sim$	shrub/sapling removal
	herbaceous/aquatic bed removal
$\overline{\times}$	sedimentation
	dredging
	farming
	nutrient enrichment

subtotal this page

max 20 pts.

subtotal

ast revised 1 February 2001 jjm

W-BAO 121912-10

Site:	AEP T	TRENT	-DELAG	JARE	Rater(	s): <i>B</i>	340	JAC	Date: 12/19/12
0	/8 subtotal first		etric 5	. Special W	/etland	ds.	,		
max 10 pts.	subtotal	Chec	Bog ( Fen ( Old gi Matur Lake i Lake i Relict Known	•	) wetland-un wetland-re Dak Openir deral threa ird/water fo	stricted hy ngs) (10) tened or e owl habitat	ydrolog endang at or usa	y (5) ered species (10) age (10)	
2	20	Me						spersion, microto	pography.
max 20 pts.	subtotal	⊸ 6a.∨	Vetland Ved	getation Communities		Venetation	ion Co	mmunity Cover Scale	
				using 0 to 3 scale.		0		Absent or comprises <0.1ha (0.24	474
		Γ	Aquati			1		Present and either comprises small	17 Facres) contiguous area
		-	/ Emerg			•	- 1'		
		2	5 Shrub				Į	vegetation and is of moderate q	
		3	Forest			2		significant part but is of low qua	
		}	Mudfia	to		2	1	Present and either comprises sign	nificant part of wetland's
			<b>─</b>					vegetation and is of moderate q	uality or comprises a small
			Open v	vater				part and is of high quality	
		L	Other_		_	3	F	resent and comprises significant	part, or more, of wetland's
		6b. h	orizontai (p	lan view) interspersio	on.		ĺ	vegetation and is of high quality	, and the state of the state of
		Selec	t only one.					3. 1-0.10	
		Γ	High (5	5) ·		Narrative	e Desc	ription of Vegetation Quality	
				ately high(4)		low	Ti.	ow spp diversity and/or predomir	conso of non-other
			Modera				- 1-	disturbance tolerant native spec	iance of nonnative of
		.  -		ately low (2)		mod		lative san are deminant annual spec	ies
		1	Low (1			mod	, l.,	lative spp are dominant compone	ent of the vegetation,
		۲	None (					although nonnative and/or distur	bance tolerant native spp
		60 C		o, invasive plants. Ref			- {	can also be present, and specie	s diversity moderate to
		to Tab	overage or	long form for list. A	ㅋㅋ SL		- 1	moderately high, but generally w	//o presence of rare
					00			threatened or endangered spp	
		or dec		or coverage		high	A	predominance of native species	, with nonnative spp
		L		ve >75% cover (-5)			ŀ	and/or disturbance tolerant nativ	e spp absent or virtually
		~ L	<u></u> Modera	ite 25-75% cover (-3	)			absent, and high spp diversity ar	nd often, but not always
		2 L		5-25% cover (-1)				the presence of rare, threatened	Or endangered spp.
			Nearly	absent <5% cover (0	)				7 or oricangored app
			Absent	(1)		Mudfiat a	and Op	en Water Class Quality	
		6d. M	licrotopogra	phy.		0		bsent <0.1ha (0.247 acres)	
		Score	all present	using 0 to 3 scale.		1	- 17	ow 0.1 to <1ha (0.247 to 2.47 acr	
		Г		led hummucks/tussu	cks	2		oderate 1 to <4ha (2.47 to 9.88	es)
		.		woody debris >15cn		3			acres)
		/ <u> </u>	Standin	g dead >25cm (10in	\ dbb		111	igh 4ha (9.88 acres) or more	
			Amphil	ian breeding pools		Microton	o aveni		
				uning pools				ny Cover Scale	
						0		bsent	
11						1		resent very small amounts or if m of marginal quality	
20						2	P	resent in moderate amounts, but	not of highest
								quality or in small amounts of hig	
						3	,	esent in moderate or greater am	ounts
1201								and of highest quality	

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in

Case No(s). 13-0171-EL-BLN

Summary: Letter of Notification Trent-Delaware 138kV Line Improvement Project - Part 1 electronically filed by Mr. Yazen Alami on behalf of AEP Ohio Transmission Company