

NOTTINGHAM - FREEBYRD 138kV LINE



PROPOSED LINE TOWER SUSPENSION CONFIGURATION

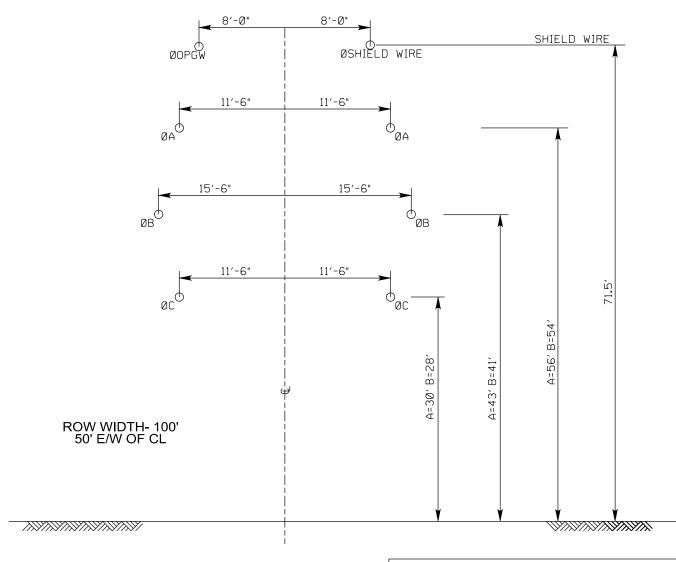
NOT TO SCALE

FIGURE 2

(6-WIRED CIRCUIT CONFIGURATION)

(6) 1,233 kcm ACSR TW TYPE13

1-7NUM1Ø ALUMOWELD 1- 96 FIBRE OPGW



DIMENSION A: DOUBLE CIRCUIT (STEEL TOWER) (UNDER NORMAL MAX & EMERGENCY LINE LOADING)

DIMENSION B: DOUBLE CIRCUIT (STEEL TOWER). (UNDER WINTER NORMAL CONDUCTOR RATING AT 120 F)



NOT TO SCALE | 11/3/2014- KCI

APPENDIX A

SOCIOECONOMIC, LAND USE, AND AGRICULTURAL DISTRICT REVIEW REPORT

NOTTINGHAM-FREEBYRD 138KV TRANSMISSION LINE ADJUSTMENT

SOCIOECONOMIC, LAND USE, AND AGRICULTURAL DISTRICT REVIEW REPORT

Prepared for:

American Electric Power Ohio Transmission Company 700 Morrison Road Gahanna, Ohio 45230



Prepared by:

AECOM 525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Project #: 60423051

October 2015





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FIGURES (follow text)

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FIGURE 1 LAND USE MAP





1.0 PROJECT DESCRIPTION

This document presents the socioeconomic, land use, and agricultural district review conducted by AECOM Corporation (AECOM) for American Electric Power Ohio Transco's (AEP Ohio Transco) proposed Nottingham-Freebyrd 138 kV Transmission Line Project (Project). The Project is required to meet the needs of a specific customer. In response to the customer's needs, AEP Ohio Transco is proposing to install the new Nottingham-Freebyrd 138 kV line between the proposed Nottingham Switch, a 138 kV switching station, and the existing Freebyrd Station in Harrison County, Ohio.

As part of the Ohio Power Siting Board (OPSB) Letter of Notification (LON) requirements, AEP Ohio Transco is required to assess and report the socioeconomic, land use, and agricultural district characteristics potentially affected by the Project, as stated in Ohio Administrative Code (OAC) Rule 4906-11-01(D)(1) and (2). These rules state:

- (D) Socioeconomic data. Describe the social and ecological impacts of the project. This description shall contain the following information:
 - (1) A brief, general description of land use within the vicinity of the proposed project, including: (a) a list of municipalities, townships, and counties affected; and (b) estimates of population density adjacent to rights-of-way within the study corridor (the U.S. census information may be used to meet this requirement).
 - (2) The location and general description of all agricultural land (including agricultural district land) existing at least sixty days prior to submission of the letter of notification within the proposed electric power transmission line rightof-way, or within the proposed electric power transmission substation fenced-in area, or within the construction site boundary of a proposed compressor station.

AEP Ohio Transco retained AECOM to conduct a desktop review of socioeconomic, land use, and agricultural district land characteristics. A study area was established that extends 1,000 feet on either side of the proposed Nottingham-Freebyrd 138 kV centerline. This resulted in an approximately 1,190-acre study area. In conjunction with ecological field surveys for the Project, AECOM noted land uses within this study area. This report will be used to assist AEP Ohio Transco's efforts to avoid or minimize impacts to socioeconomic characteristics and land uses potentially present in the study area during construction activities.

2.0 GENERAL LAND USE DESCRIPTION

Land use within the study area is shown on Figure 1. Current land use characteristics were obtained through review of United States Farm Service Agency National Agricultural Imagery Program aerial photography taken in 2013; the United States Geological Survey (USGS) 7.5-minute topographic map of the Flushing, Ohio (1976, photorevised 1978) and Jewett, Ohio (1978) quadrangles; a tax map of the Project area; and a field reconnaissance conducted in October 2015.





Land uses within the study area include grass-covered previously strip-mined land used as pasture, a natural gas processing facility, small wooded/scrub areas, and utility corridors. No residential or institutional land uses were identified within 1,000 feet of the proposed Project property.

Based on a review of the Harrison County website, no comprehensive plans or other future land use documents were identified for the county or Athens or Cadiz Townships. Athens and Cadiz Townships have not adopted zoning regulations.

3.0 POPULATION DENSITY ESTIMATE

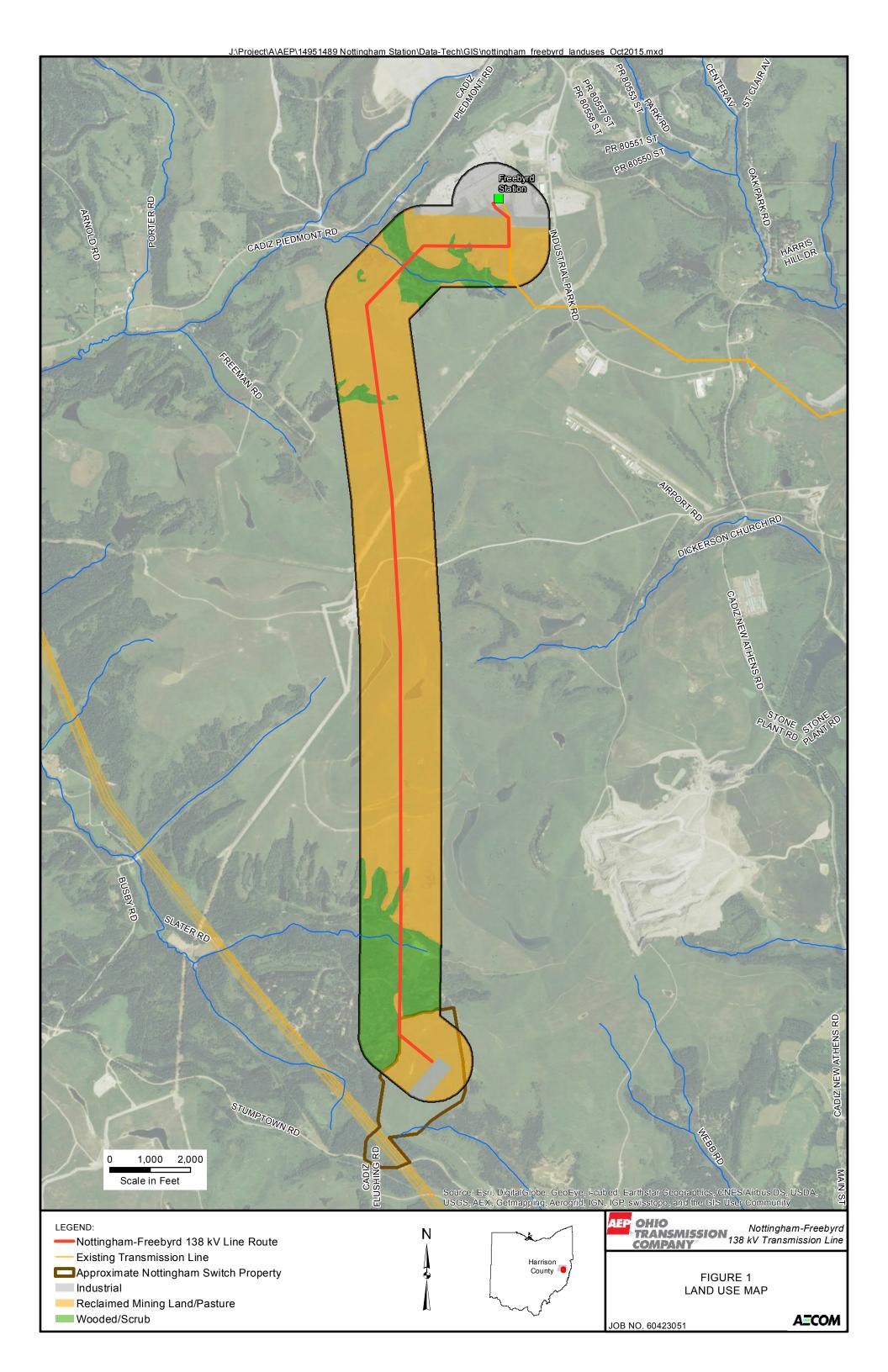
The Project is located entirely within Athens and Cadiz Townships of Harrison County. No homes were identified within 1,000 feet of the Project. No planned residential developments within the study area were identified.

4.0 AGRICULTURAL DISTRICT LAND

AECOM contacted the Harrison County Assessor's office regarding parcels registered in the agricultural district land program. There are reportedly no agricultural district land parcels within 1,000 feet of the proposed route.

5.0 CONCLUSION

The Project is not expected to significantly impact current socioeconomic characteristics, land use, or agricultural district land in the vicinity. The Project is not expected to impact any future land use plans for the area.



APPENDIX B

PUBLIC OFFICIALS LETTERS SERVING COPY OF LETTER OF NOTIFICATION



Puskarich Public Library Ms. Sandi Thompson, Director 200 East Market Street Cadiz, OH 43907

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Ms. Thomposon:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

The proposed Nottingham-Freebyrd 138kV Transmission Line Adjustment, Public Utilities Commission of Ohio Case Number 15-1756-EL-BLN, consists of the construction of a new 138-kilovolt (kV) transmission line from the company's proposed Nottingham Substation to the existing Freebyrd Substation. This new transmission line will provide additional electricity to Markwest's Utica Plant. AEP Ohio Transco will build the new line using standard double-circuit steel 138-kV structures. The Nottingham-Freebyrd 138-kV transmission line will be approximately four miles long and will be located in Athens and Cadiz townships. This project will be an approximate \$8 million investment by AEP Ohio Transco. Construction is scheduled to begin in April 2016.

We ask that this Letter of Notification be made available to the public.

In compliance with Rule 4906-11-01 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.

Please feel free to contact me at 614-552-1929 and I would be happy to answer any questions concerning this project.

Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Harrison County Board of Commissioners Mr. William H. Host Mr. Dale Ray Norris Mr. Don Rae Bethel 101 Market Street Cadiz, OH 43907

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Commissioners:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

The proposed Nottingham-Freebyrd 138kV Transmission Line Adjustment, Public Utilities Commission of Ohio Case Number 15-1756-EL-BLN, consists of the construction of a new 138-kilovolt (kV) transmission line from the company's proposed Nottingham Substation to the existing Freebyrd Substation. This new transmission line will provide additional electricity to Markwest's Utica Plant. AEP Ohio Transco will build the new line using standard double-circuit steel 138-kV structures. The Nottingham-Freebyrd 138-kV transmission line will be approximately four miles long and will be located in Athens and Cadiz townships. This project will be an approximate \$8 million investment by AEP Ohio Transco. Construction is scheduled to begin in April 2016.

We ask that this Letter of Notification be made available to the public.

In compliance with Rule 4906-11-01 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.

Please feel free to contact me at 614-552-1929 and I would be happy to answer any questions concerning this project.

Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Harrison County Engineer Mr. Robert K. Sterling 32500 Cadiz-Dennison Road Scio, OH 43988

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Mr. Sterling:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

The proposed Nottingham-Freebyrd 138kV Transmission Line Adjustment, Public Utilities Commission of Ohio Case Number 15-1756-EL-BLN, consists of the construction of a new 138-kilovolt (kV) transmission line from the company's proposed Nottingham Substation to the existing Freebyrd Substation. This new transmission line will provide additional electricity to Markwest's Utica Plant. AEP Ohio Transco will build the new line using standard double-circuit steel 138-kV structures. The Nottingham-Freebyrd 138-kV transmission line will be approximately four miles long and will be located in Athens and Cadiz townships. This project will be an approximate \$8 million investment by AEP Ohio Transco. Construction is scheduled to begin in April 2016.

We ask that this Letter of Notification be made available to the public.

In compliance with Rule 4906-11-01 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.

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Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Cadiz Township Trustee Mr. Ray F. Poillucci 651 McCready Avenue Cadiz, OH 43907

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Mr. Poillucci:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

The proposed Nottingham-Freebyrd 138kV Transmission Line Adjustment, Public Utilities Commission of Ohio Case Number 15-1756-EL-BLN, consists of the construction of a new 138-kilovolt (kV) transmission line from the company's proposed Nottingham Substation to the existing Freebyrd Substation. This new transmission line will provide additional electricity to Markwest's Utica Plant. AEP Ohio Transco will build the new line using standard double-circuit steel 138-kV structures. The Nottingham-Freebyrd 138-kV transmission line will be approximately four miles long and will be located in Athens and Cadiz townships. This project will be an approximate \$8 million investment by AEP Ohio Transco. Construction is scheduled to begin in April 2016.

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Please feel free to contact me at 614-552-1929 and I would be happy to answer any questions concerning this project.

Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Cadiz Township Trustee Mr. Clint A. Barr 111 Old Steubenville Pike Cadiz, OH 43907

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Mr. Barr:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

The proposed Nottingham-Freebyrd 138kV Transmission Line Adjustment, Public Utilities Commission of Ohio Case Number 15-1756-EL-BLN, consists of the construction of a new 138-kilovolt (kV) transmission line from the company's proposed Nottingham Substation to the existing Freebyrd Substation. This new transmission line will provide additional electricity to Markwest's Utica Plant. AEP Ohio Transco will build the new line using standard double-circuit steel 138-kV structures. The Nottingham-Freebyrd 138-kV transmission line will be approximately four miles long and will be located in Athens and Cadiz townships. This project will be an approximate \$8 million investment by AEP Ohio Transco. Construction is scheduled to begin in April 2016.

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Please feel free to contact me at 614-552-1929 and I would be happy to answer any questions concerning this project.

Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Cadiz Township Trustee Mr. Chester S. Porter 380 Oak Park Cadiz, OH 43907

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Mr. Porter:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

The proposed Nottingham-Freebyrd 138kV Transmission Line Adjustment, Public Utilities Commission of Ohio Case Number 15-1756-EL-BLN, consists of the construction of a new 138-kilovolt (kV) transmission line from the company's proposed Nottingham Substation to the existing Freebyrd Substation. This new transmission line will provide additional electricity to Markwest's Utica Plant. AEP Ohio Transco will build the new line using standard double-circuit steel 138-kV structures. The Nottingham-Freebyrd 138-kV transmission line will be approximately four miles long and will be located in Athens and Cadiz townships. This project will be an approximate \$8 million investment by AEP Ohio Transco. Construction is scheduled to begin in April 2016.

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Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Cadiz Township Fiscal Officer Ms. Karen S. Conrad-Poillucci 651 McCready Avenue Cadiz, OH 43907

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Ms. Conrad-Poillucci:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

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Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Athens Township Trustee Ms. Elizabeth A. Deaton 177 Main Street North New Athens, OH 43981

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Ms. Deaton:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

The proposed Nottingham-Freebyrd 138kV Transmission Line Adjustment, Public Utilities Commission of Ohio Case Number 15-1756-EL-BLN, consists of the construction of a new 138-kilovolt (kV) transmission line from the company's proposed Nottingham Substation to the existing Freebyrd Substation. This new transmission line will provide additional electricity to Markwest's Utica Plant. AEP Ohio Transco will build the new line using standard double-circuit steel 138-kV structures. The Nottingham-Freebyrd 138-kV transmission line will be approximately four miles long and will be located in Athens and Cadiz townships. This project will be an approximate \$8 million investment by AEP Ohio Transco. Construction is scheduled to begin in April 2016.

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Please feel free to contact me at 614-552-1929 and I would be happy to answer any questions concerning this project.

Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Athens Township Trustee Mr. David E. Butler 117 East Wheeling Street New Athens, OH 43981

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Mr. Butler:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

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Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Athens Township Trustee Mr. Michael T. Saffell 103 South Main Street New Athens, OH 43981

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Mr. Saffell:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

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Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Athens Township Fiscal Officer Mr. David A. Watson 74070 Flushing New Athens Road New Athens, OH 43981

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Mr. Watson:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

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Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Mayor William L. Sedgmer III Village of New Athens 130 East Brown Street New Athens, OH 43981

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Mr. Sedgmer:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

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Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power



Mayor Kenneth A. Zitko Village of Cadiz 44375 Cherrywood Drive Cadiz, OH 43907

RE: Letter of Notification

Nottingham-Freebyrd 138kV Transmission Line Adjustment

Case Number: 15-1756-EL-BLN

Dear Mayor Zitko:

In accordance with Rules 4906 of the Ohio Administrative Code (OAC), AEP Ohio Transmission Company (AEP Ohio Transco) is required to submit a Letter of Notification to the State of Ohio Power Siting Board (OPSB) whenever certain additions are made to our transmission facilities.

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Sincerely,

Brett E. Schmied

Project Outreach Specialist American Electric Power

APPENDIX C

THREATENED AND ENDANGERED SPECIES SURVEY REPORT

NOTTINGHAM-FREEBYRD 138KV TRANSMISSION LINE ADJUSTMENT

THREATENED AND ENDANGERED SPECIES SURVEY REPORT

Prepared for:

American Electric Power Ohio Transmission Company 700 Morrison Road Gahanna, Ohio 43230



Prepared by:



525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Project #: 60423051

October 2015





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Number

ATTACHMENT A AGENCY RESPONSES





1.0 PROJECT DESCRIPTION

This document presents the results of the threatened and endangered species assessment conducted by AECOM for AEP Ohio Transmission Company's (AEP Ohio Transco) proposed Nottingham-Freebyrd 138 kV Transmission Line Project (Project). The Project is needed to meet the needs of a specific customer. In response to the customer's needs, AEP Ohio Transco is proposing to install the new Nottingham-Freebyrd 138 kV line between the proposed Nottingham Switch, a 138 kV switching station, and the existing Freebyrd Station in Harrison County, Ohio.

As part of the Ohio Power Siting Board (OPSB) Letter of Notification (LON) requirements, AEP Ohio Transco is required to assess and report the federal and state designated species potentially affected by the Project, as stated in Ohio Administrative Code (OAC) Rule 4906-11-01(E)(1). This rule states:

- (E) Environmental data. Describe the environmental impacts of the proposed project. This description shall include the following information:
 - (1) A description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the area 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 AECOM to conduct threatened and endangered species review and field survey within areas crossed by the proposed Project. This report will be used to assist AEP Ohio Transco's efforts to avoid impacts to threatened and endangered species potentially present in the study area during construction activities.

2.0 METHODS

The first phase of the survey involved a review of online lists of federal and state species of concern. In addition to the review of available literature, AECOM submitted a request to Ohio Department of Natural Resources (ODNR) Biodiversity Database for geographical information system (GIS) records of species of concern that were reported within close proximity to the Project. These GIS records were overlain on the Project GIS maps to identify designated species and other sensitive areas as reported by ODNR in relation to the Project. ODNR reported no records of designated species within one mile of the Project area. A copy of the letter provided with the Biodiversity Database GIS records is included in Attachment A. AECOM also submitted a coordination letter to the U.S. Fish and Wildlife Service (USFWS) and ODNR soliciting comments on the Project. Copies of the response letters provided by ODNR and USFWS are included as Appendix A. Agency-identified species and available species-specific information was reviewed to identify the various habitat types that listed species are known to frequent. This information was used during the field survey to assess the potential for these species of concern in, or near the Project study corridor.





3.0 RESULTS

AECOM field ecologists conducted a designated species habitat survey in conjunction with the stream and wetland field surveys in October 2015. AECOM observed the Project route to be predominantly across grass-covered reclaimed mining land.

3.1 State Species of Concern

ODNR provided Biodiversity Database GIS records and a corresponding letter response dated September 12, 2014. The data included the Project area plus an approximate one mile buffer. No records of special status species or habitats were identified within the search area. A copy of the ODNR response is included in Attachment A.

After receiving the ODNR Biodiversity Database response, AECOM sent a second letter to ODNR soliciting specific comments regarding the Project on October 23, 2014. AECOM received a response from ODNR on December 10, 2014. A copy of the ODNR response is also included in Attachment A. Table 1 lists the species identified by ODNR in Harrison County in the October 23, 2014 letter.

TABLE 1
STATE LISTED SPECIES THAT COULD INHABIT
HARRISON COUNTY, OHIO

Common Name	Scientific Name	State Status				
Mammals						
Indiana bat	Myotis sodalis	Endangered				
Black bear	AECOMus americanus	Endangered				
Birds						
Upland sandpiper	Bartramia longicauda	Endangered				

ODNR requested that suitable Indiana bat habitat should be conserved or cut between October 1 and March 31. A net survey must be conducted between June 15 and July 31 prior to cutting, if clearing is necessary during summer months.

The range of the black bear was identified to potentially be within the vicinity of the Project. ODNR stated that due to the mobility of this species, no impacts are likely.

ODNR requested that habitat for the upland sandpiper, dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program, should not be impacted during the species' nesting period of April 15 to July 31. AEP Ohio Transco currently intends to comply with the seasonal construction restriction for vegetation clearing and grading within the proposed right-of-way. However, if construction must occur during the nesting period, a qualified biologist will complete a presence/absence survey based on the most current ODNR protocol.





No state species of concern or signs of these species were observed during the field survey.

3.2 Federal Species of Concern

To address the Project's potential to impact federally protected species, AECOM conducted a web based literature review of USFWS Ohio County Distribution of *Federally Listed Threatened, Endangered, Proposed, and Candidate Species, Revised April 2014*, to identify what species potentially occur in Harrison County, Ohio. Table 2 lists the two species identified during the USFWS literature review. A copy of the USFWS response is included in Attachment A.

TABLE 2
FEDERALLY LISTED SPECIES THAT COULD INHABIT
HARRISON COUNTY, OHIO*

Common Name	Scientific Name	Federal Status	County
Mammals			
Indiana bat	Myotis sodalis	Endangered	Harrison
Northern long-eared bat	Myotis septentrionalis	Threatened	Harrison

^{*}Ohio County Distribution of Federally-Listed Threatened, Endangered, Proposed, and Candidate Species, Revised October 2015.

Accessed October 16, 2015: http://www.fws.gov/midwest/endangered//lists/pdf/OhioCtyListOct2015.pdf

Indiana Bat: The federal government lists this species as endangered in Ohio. Winter Indiana bat hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (*Carya* spp.), oak (*Quercus* spp.), ash (*Fraxinus* spp.), birch (*Betula* spp.), and elm (*Ulmus* spp.) have been found to be utilized by the Indiana bat. These tree species and many others may be used when dead, if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low density sub-canopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey. Proximity to water is critical, because insect prey density is greater over or near open water. Very little of the Project route is wooded, although trees are present just north of the Nottingham Switch property and along Brushy Fork, near the northern end of the Project.

Northern Long-Eared Bat: The federal government lists this species as threatened in Ohio. As with the Indiana bat, winter northern long-eared bat hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. Northern long-eared bat has also been found, albeit rarely, roosting in structures like barns and sheds.





In an email dated November 14, 2014, USFWS indicated that due to the project type, size, location, and the proposed implementation of seasonal tree cutting (only clearing between October 1 and March 31) to avoid impacts to Indiana bats and northern long-eared bats, adverse effects to any federally endangered, threatened, proposed or candidate species are not anticipated.

Bald eagle: The bald eagle has been delisted as a designated species at the federal and state levels. However, it remains monitored due to the recent delisting. Coordination with the USFWS and ODNR did not identify the bald eagle as a concern in the project vicinity. However, the OPSB staff report recommending approval of the original Nottingham-Freebyrd alignment included a condition of the certificate:

The Applicant shall contact USFWS to determine if any recorded bald eagle nests are in the project area and have an environmental specialist survey the area to determine if any nests are present. If nests are present, work within 660 feet of a nest or within the direct line of-site of a nest shall be restricted from January 15 thought July 31. Existing trees should be preserved as much as possible to preserve the character of the habitat.

AEP intends to contract a qualified biologist to conduct a bald eagle nest survey within 660 feet or within the line of sight of the proposed project alignment once leaves fall for the season allowing for increased visibility. AEP intends to comply with the seasonal construction restrictions if a bald eagle next site is identified.

4.0 SUMMARY

AEP retained AECOM to conduct threatened and endangered species review for areas located within 1,000 feet of the proposed Project and a field survey within 100 feet of the Project route. This report will be used to assist AEP's efforts to avoid impacts to threatened and endangered species potentially present in the study area during construction activities. The field survey was conducted by AECOM field biologists in October 2015. While limited habitat for the Indiana bat, the northern long-eared bat, and upland sandpiper were observed during the field surveys, no species of concern or signs of these species were observed. AEP Ohio Transco intends to comply with seasonal tree clearing restrictions to avoid impacts to the Indiana and northern long-eared bats. Impacts to the upland sandpiper are currently expected to be avoided through adherence to the seasonal construction restriction for vegetation clearing and initial grading within the proposed right-of-way. However, if construction must occur during the nesting period in suitable habitat for the upland sandpiper, a qualified biologist will complete a presence/absence survey based on the most current ODNR protocol.

5.0 CONCLUSION

Based upon the nature of the Project, review of available current literature, review of federal and state records of species of concern, the field survey, and adherence to seasonal construction restrictions or presence/absence surveys, if necessary, it is not anticipated that federal or state species of concern will be impacted by the Project as currently planned.

ATTACHMENT A

AGENCY RESPONSES



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Ohio Division of Wildlife Scott Zody, Chief 2045 Morse Rd., Bldg. G Columbus, OH 43229-6693

September 12, 2014

Aaron Geckle URS 525 Vine Street, Suite 1800 Cincinnati, OH 45202

Dear Mr. Geckle

I have reviewed the Natural Heritage Database for the Nottingham-Freebyrd Project in Jefferson County based on the provided shape file. We have no records for rare species and managed areas in your project area. We do have records for managed areas. I have attached a shape file for managed areas that include state wildlife areas, nature preserves, parks and forests, national wildlife refuges, county metro parks, as well as sites owned by non-profit groups. Please be aware that the managed areas layer may not be complete.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although we inventory all types of plant communities, we only maintain records on the highest quality areas.

This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Please contact me at 614-265-6452 if I can be of further assistance.

Sincerely,

Greg Schneider, Administrator Ohio Natural Heritage Program

Greg Schnerden

Fax: (614) 267-4764

Office of Real Estate Paul R. Baldridge, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229 Phone: (614) 265-6649

December 10, 2014

Aaron Geckle URS Corporation 525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Re: 14-843; AEP Nottingham Station and Nottingham-Freebyrd 138 kV transmission line projects

Project: AEP is proposing to construct a new electric substation and approximately five miles of electric transmission line

Location: The project is located in Cadiz and Athens Township, Harrison County, Ohio.

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

Natural Heritage Database: A review of the Natural Heritage Database produced the following comments.

The Natural Heritage Database has no records within a one mile radius of the project. We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state parks or national parks, state or national forests or national wildlife refuges within the project area. The review was performed on the project area you specified in your request as well as an additional one mile radius. Records searched date from 1980 to present.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

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

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

The project is within the range of the Indiana bat (Myotis sodalis), a state and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: Shagbark hickory (Carya ovata), Shellbark hickory (Carya laciniosa), Bitternut hickory (Carya cordiformis), Black ash (Fraxinus nigra), Green ash (Fraxinus pennsylvanica), White ash (Fraxinus americana), Shingle oak (Quercus imbricaria), Northern red oak (Quercus rubra), Slippery elm (Ulmus rubra), American elm (Ulmus americana), Eastern cottonwood (Populus deltoides), Silver maple (Acer saccharinum), Sassafras (Sassafras albidum), Post oak (Ouercus stellata), and White oak (Ouercus alba). Indiana bat habitat consists of suitable trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. If suitable trees occur within the project area, the DOW recommends that these trees be conserved. If suitable habitat occurs on the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, the project is not likely to impact this species.

The project is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, the project is not likely to impact this species.

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

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

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler ODNR Office of Real Estate 2045 Morse Road, Building E-2 Columbus, Ohio 43229-6693 John.Kessler@dnr.state.oh.us

Geckle, Aaron

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>

Sent: Friday, November 14, 2014 9:24 AM

To: Geckle, Aaron

Subject: Nottingham Station and Nottingham-Freebyrd 138kV Electrical Transmission Line,

Harrison Co.

TAILS# 03E15000-2015-TA-0167

Dear Mr. Geckle,

We have received your recent correspondence regarding potential impacts to federally listed species in the vicinity of the above referenced project. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area.

LISTED, PROPOSED, AND CANDIDATE SPECIES COMMENTS: Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (only clearing between October 1 and March 31) to avoid impacts to Indiana bats and northern long-eared bats, we do not anticipate adverse effects to any federally endangered, threatened, proposed or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

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

If you have additional questions or require further assistance with your project proposal, please contact me at the following number (614) 416-8993. In addition, you can find more information on natural resources in Ohio, and a county list of federally threatened and endangered species in Ohio, by visiting our homepage at: http://www.fws.gov/midwest/ohio.

Sincerely,

Angela Boyer

Acting Field Supervisor

Angela L. Boyer

APPENDIX D

AREAS OF ECOLOGICAL CONCERN, WETLAND DELIINATION, AND STREAM ASSESSMENT REPORT

NOTTINGHAM-FREEBYRD 138KV TRANSMISSION LINE ADJUSTMENT

AREAS OF ECOLOGICAL CONCERN, WETLAND DELINEATION, AND STREAM ASSESSMENT REPORT

Prepared for:

American Electric Power Ohio Transmission Company 700 Morrison Road Gahanna, Ohio 45230



Prepared by:



525 Vine Street, Suite 1800 Cincinnati, Ohio 45202

Project #: 60423051

October 2015





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Number

ATTACHMENT A REPRESENTATIVE PHOTOGRAPHS ATTACHMENT B ORAM WETLAND FORMS





1.0 PROJECT DESCRIPTION

This document presents the results of the wetland delineation and stream assessment conducted by AECOM for AEP Ohio Transmission Company's (AEP Ohio Transco) proposed Nottingham Switch Project (Project). The Project is required to meet the needs of a specific customer. In response to the customer's needs, AEP Ohio Transco is proposing to install the new Nottingham-Freebyrd 138 kV line between the proposed Nottingham Switch, a 138 kV switching station, and the existing Freebyrd Station in Harrison County, Ohio.

As part of the Ohio Power Siting Board (OPSB) Letter of Notification (LON) requirements, AEP Ohio Transco 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 Ohio Transco retained AECOM to review areas of ecological concern, as defined above, within the proposed Project vicinity and conduct a field survey of wetlands and streams within 100 feet of the proposed transmission line. This report will be used to assist AEP Ohio Transco's efforts to avoid impacts to areas of ecological concern present in the study area during construction.

2.0 METHODS

2.1 Special Status Ecological Areas

AECOM reviewed maps and Geographical Information System (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 Ohio Department of Natural Resources (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. AECOM also noted land use during the field reconnaissance conducted on October 7, 2015.

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

National Wetland Inventory (NWI) wetlands are areas of potential wetland that have been identified from U.S. Fish and Wildlife Service (USFWS) aerial photo-interpretation and which have typically not been field verified. Forested and heavy scrub/shrub wetlands are often difficult to interpret on NWI maps without a site visit, as foliage effectively hides the visual signature that indicates the presence of standing water and moist soils from an aerial view. In addition, many NWI-mapped wetlands are not found during field surveys. As a result, NWI maps may 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 U.S. Geological Survey (USGS) topographic maps.

As requested by AEP, AECOM restricted the wetland assessments to: 1) identifying wetlands to their appropriate Cowardin classification (Cowardin, et al., 1979) and identification of boundaries, and 2) wetland 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, AECOM 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 onsite determination whether a wetland was present or not based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology and to identify the approximate boundaries.

AECOM biologists identified wetlands through a pedestrian site reconnaissance of the study corridor, 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 Global Positioning System (GPS) unit where the proposed Project enters and exits a wetland.

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 AECOM 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 AECOM.

<u>Wetland Classifications:</u> For this study, wetlands were classified based on the naming convention found in Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al, 1979).





Ohio Rapid Assessment Method v. 5.0: The Ohio Environmental Protection Agency's (Ohio EPA) Ohio Rapid Assessment Method (ORAM) for Wetlands Version 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 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.

2.3 Stream and River Crossings

Regulatory activities under the Clean Water Act (CWA) 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 CWA 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, AECOM 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

AECOM 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.

According to the FEMA National Flood Hazard Layer (NFHL) (GIS shapefile), the Project is not located within any 100-year flood zones. The project is located on Panels 39067C0310D and 39067C0194D (effective May 4, 2009), and is entirely located within Flood Zone X, an area with minimal flood hazard. No changes in flood elevations are anticipated as a result of the Project.





3.2 Wetland Assessment

<u>National Wetland Inventory Map Review:</u> According to the NWI map of the Flushing and Jewett, Ohio quadrangles, the Project area includes three mapped NWI wetlands. The three mapped NWI wetlands are all classified as freshwater ponds, and are listed as PUBGx (Palustrine unconsolidated bottom, intermittently exposed, excavated). The mapped NWI wetlands were all identified as ponds during the field assessment.

<u>Wetland Delineation:</u> AECOM identified eleven wetlands within the Project ecological survey area, ranging in size from 0.01 to 1.10 acre, as shown in Table 1. All but two of the wetlands are of the same wetland habitat type: palustrine emergent (PEM). Wetland 3 is palustrine scrub-shrub (PSS)/PEM and Wetland 4 is PEM/PSS. Ten of the wetlands are Category 1 wetlands with ORAM scores ranging from 16 to 25.5. The remaining wetland is a Category 2 wetland, with an ORAM score of 35. These wetlands exhibit limited plant community development and had habitat and hydrology in the early stages of recovering from assumed previous manipulations as a result of former strip-mining, tree/shrub removal, mowing, and other disturbances.

The location and approximate extents of the wetlands, as delineated within the Project survey area are shown on Figure 1. Representative color photographs taken of the wetlands are provided in Attachment A. Completed ORAM forms are provided in Attachment B.

TABLE 1
WETLANDS IDENTIFIED WITHIN THE STUDY AREA

WEI EARDS IDENTIFIED WITHIN THE STODY AREA							
Wetland Name	Cowardin Wetland Type ^a	NWI Classification ^b	ORAM Score	ORAM Category	Acreage within Study Area		
Wetland 1	PEM	NC	22	Category 1	0.07		
Wetland 2	PEM	NC	20	Category 1	0.02		
Wetland 3	PSS/PEM	NC	25.5	Category 1	0.34		
Wetland 4	PEM/PSS	NC	16	Category 1	0.60		
Wetland 5	PEM	NC	35	Category 2	1.10		
Wetland 6	PEM	NC	19.5	Category 1	0.80		
Wetland 7	PEM	NC	18	Category 1	0.32		
Wetland 8	PEM	NC	17.5	Category 1	0.04		
Wetland 9/9A	PEM	NC	16.5	Category 1	0.01		
Wetland 10	PEM	NC	21.5	Category 1	0.01		
Wetland 11	PEM	NC	24	Category 1	0.23		
Total: 11	F	3.59					

Cowardin Wetland Type^a: PEM = palustrine emergent, PSS = palustrine scrub-shrub

NWI Classification^b: NC (not classified as a NWI wetland)





3.3 Stream and River Crossings

AECOM identified four streams totaling 1,137 linear feet within the study corridor which are summarized in Table 2. Two of the streams were classified as perennial, with one intermittent stream and one ephemeral stream. Stream 1 is not crossed by the centerline, although it flows into a wetland that is crossed by the centerline (Wetland 3). The remaining three streams are crossed by the centerline. The locations of the streams identified within the study corridor are shown on Figures 1 through 4. Representative color photographs were taken of representative streams during the field survey and are provided in Attachment A.

TABLE 2
STREAMS IDENTIFIED WITHIN THE SURVEY CORRIDOR

Report Name	Waterbody	Flow Regime	Length within Survey Corridor (feet)	Crossed by Centerline
Stream 1	Unnamed tributary to South Fork	Perennial	276	No
Stream 2	Unnamed tributary to South Fork	Perennial	258	Yes
Stream 3	Unnamed tributary to South Fork	Intermittent	415	Yes
Stream 4	Unnamed tributary to Brushy Fork	Ephemeral	188	Yes
Total: 4			1,137	3 Crossed

AECOM has preliminarily determined that all identified streams within the study corridor appear to be jurisdictional (i.e., waters of the U.S.), as they all appear to be tributaries that flow into other i.e., waters of the U.S.

3.4 PONDS

Three ponds were identified within the Project survey area, with approximately 1.39 acres identified within the survey corridor. Pond 3 is adjacent to Wetland 10. All of the ponds appear to be associated with former mining operations in the area. Representative color photographs were taken of ponds during the field survey and a representative photograph is provided in Attachment A.

4.0 SUMMARY

No national forests or parks designated or proposed wilderness areas, National or State Wild and Scenic Rivers, wildlife areas, wildlife refuges, wildlife management areas, or wildlife sanctuaries were identified within 1,000 feet of the proposed Project.

The Project is not located within any 100-year flood zones. The project is entirely located within Flood Zone X, an area with minimal flood hazard. No changes in flood elevations are anticipated as a result of the Project.





During the field survey, eight PEM Category 1 wetlands totaling 1.55 acres, one PEM Category 2 wetland totaling 1.10 acres, one PSS/PEM Category 1 wetland totaling 0.34 acre, and one PEM/PSS Category 1 wetland totaling 0.60 acre were identified. Four streams (two perennial, one intermittent, and one ephemeral) were identified totaling 1,137 linear feet within the survey corridor. Impacts to the wetlands and streams are expected to be minimized through avoidance or the use of timber matting for construction access.

5.0 CONCLUSION

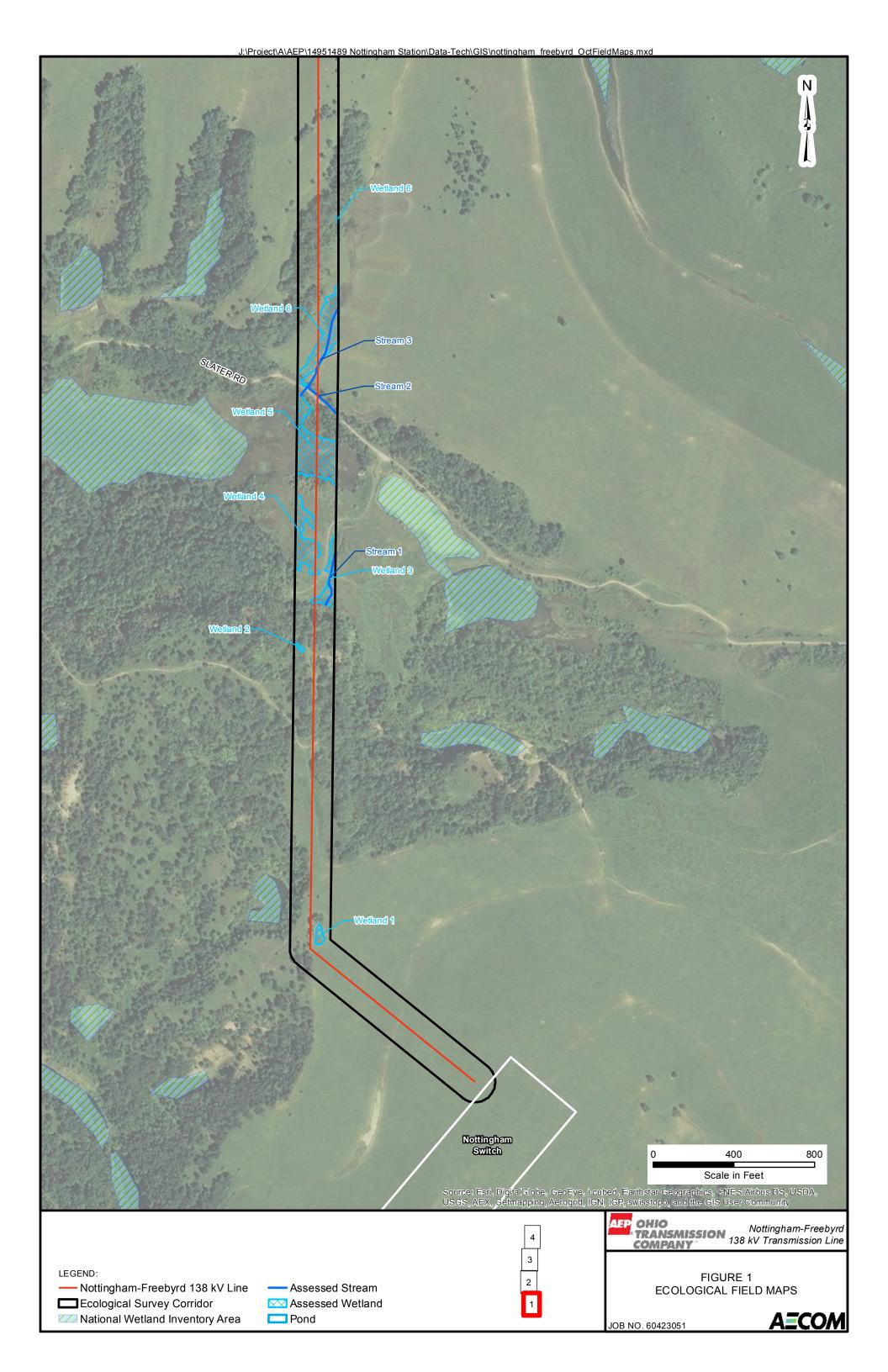
This report will be used to assist AEP Ohio Transco's efforts to avoid special status ecological areas, wetlands, and streams to the extent possible during construction of the Project, thereby minimizing impacts to these features identified within the Project area. Based on the preliminary Project footprint and identified features, no construction activity within streams or wetlands is anticipated. Erosion control methods including silt fencing are expected to be used where appropriate to minimize runoff-related impacts to 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.

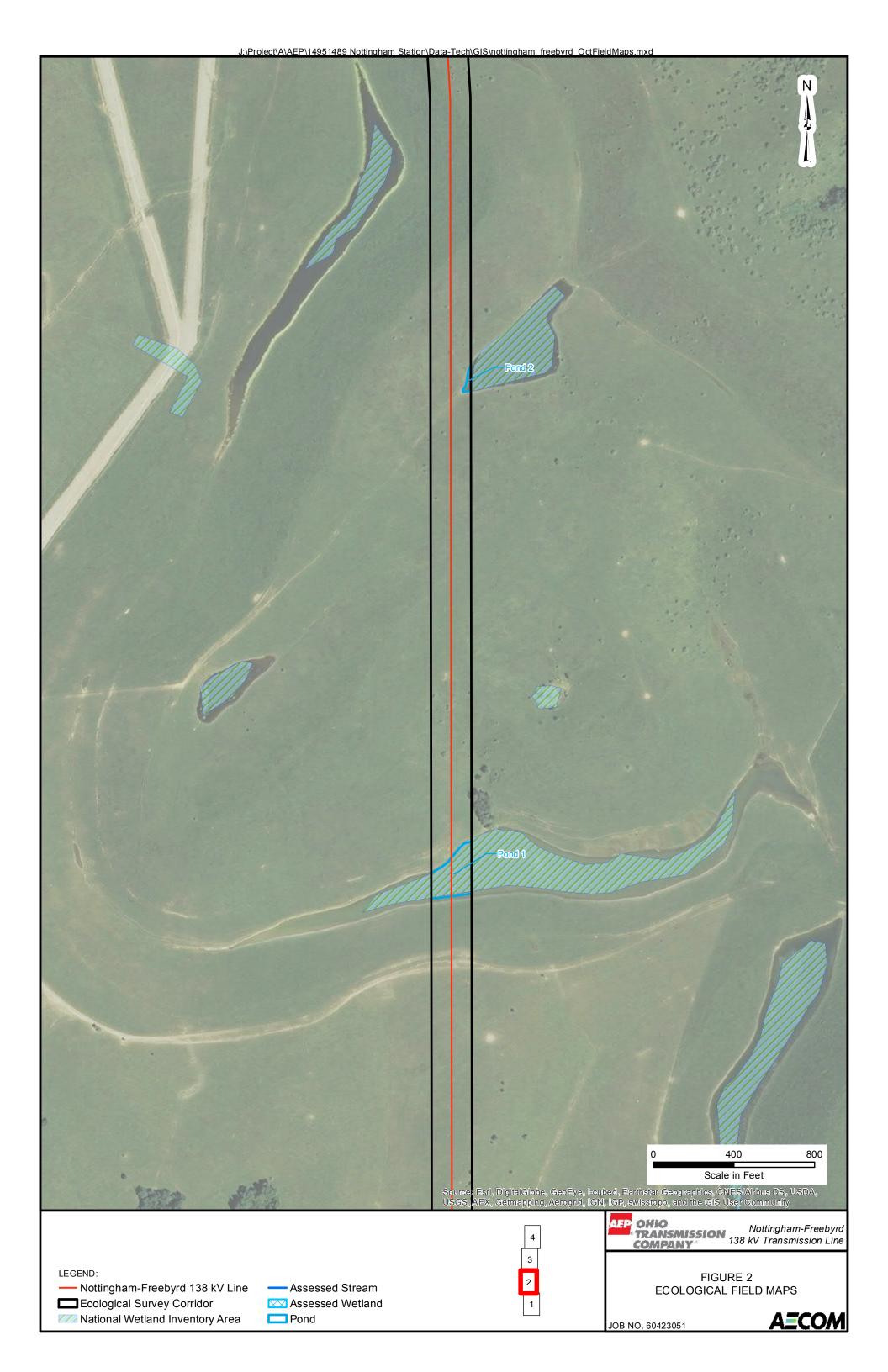


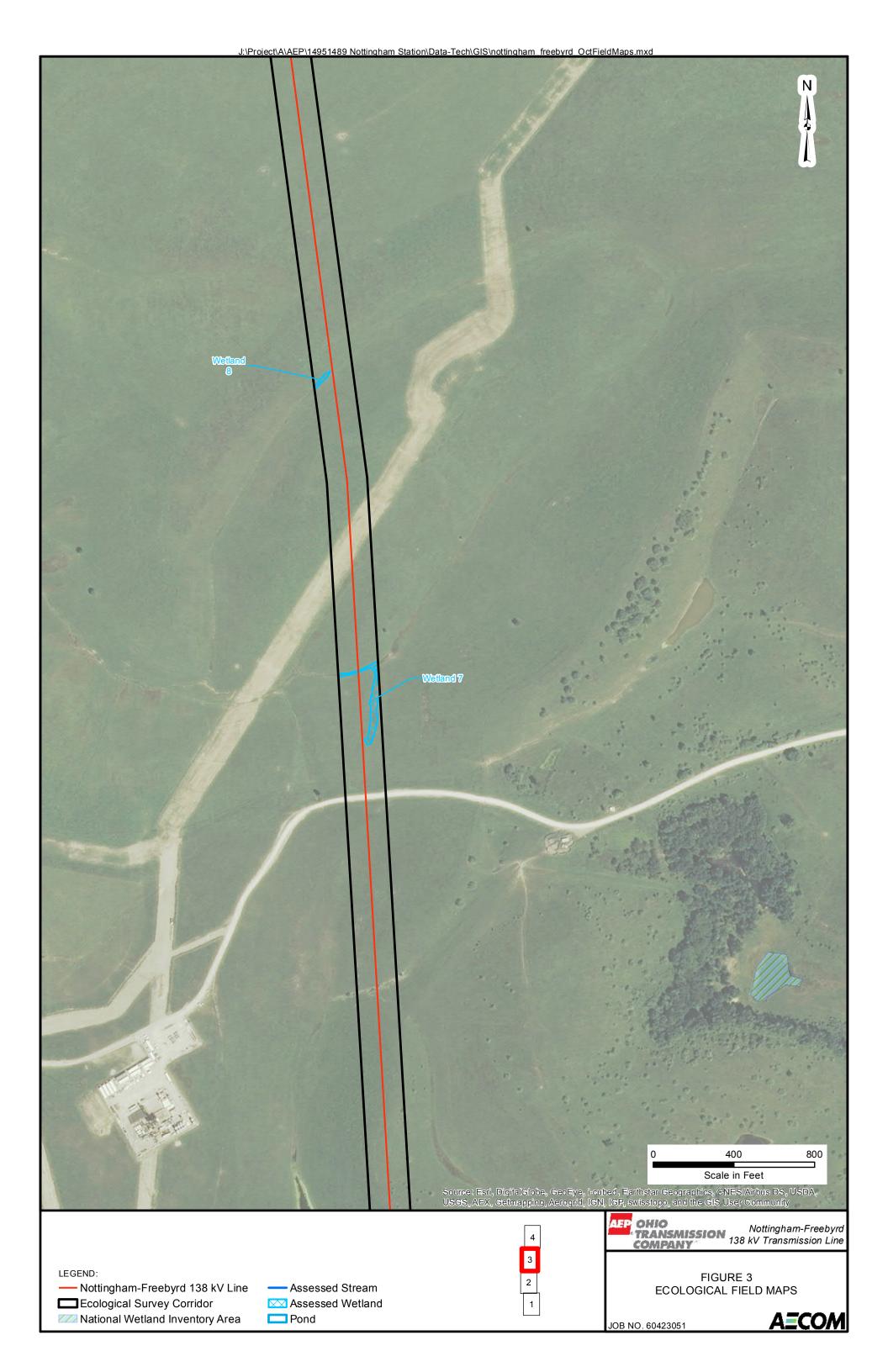


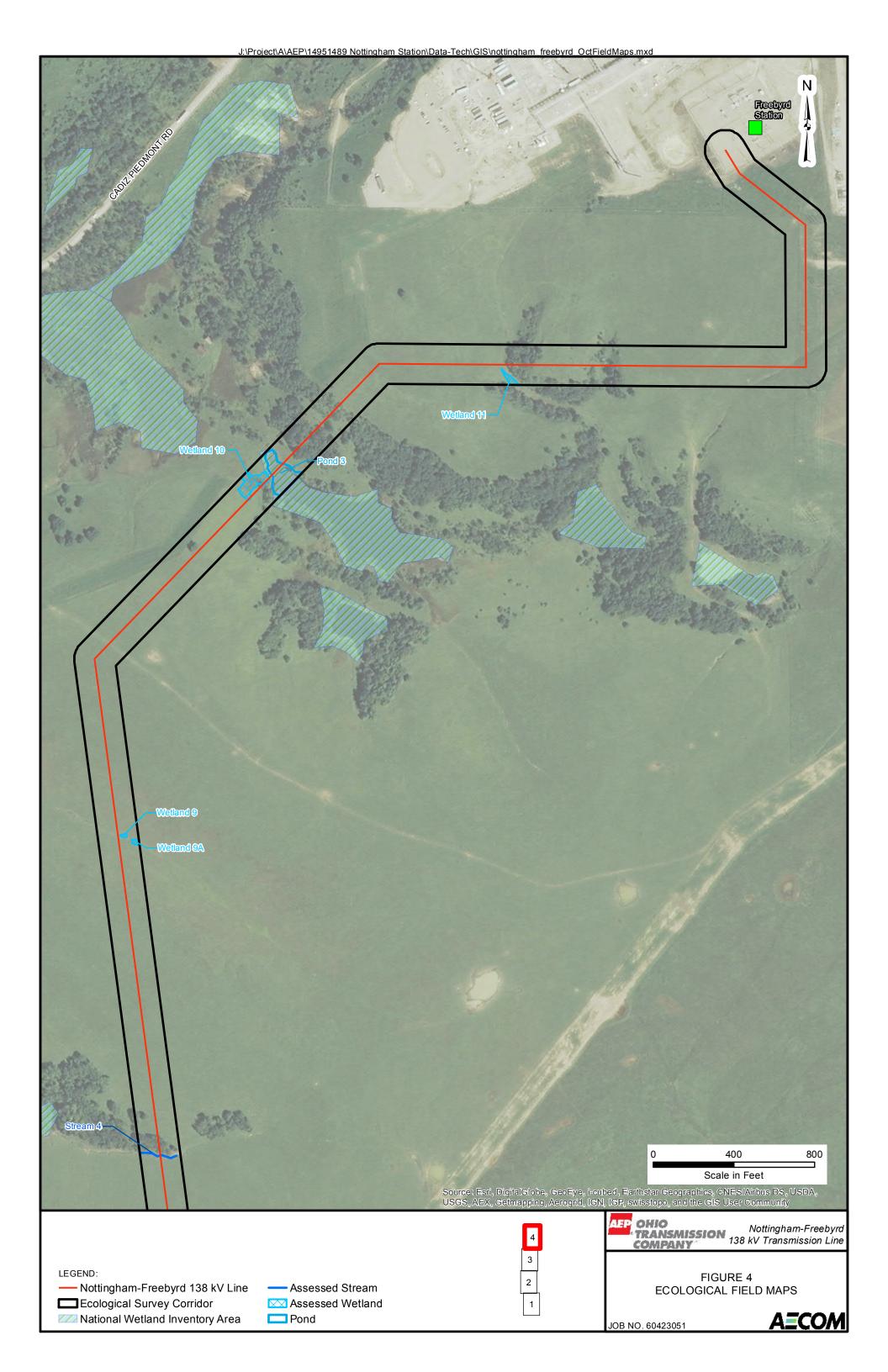
6.0 REFERENCES

- Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States.* Office of Biological Services, U.S. Fish and Wildlife Service, Washington, D.C.
- Environmental Laboratory. 1987. U.S. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station: Vicksburg, Mississippi.
- Mack, John J. 2001. Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms. Ohio EPA Technical Report WET/2001-1. Ohio Environmental Protection Agency, Division of Surface Water, 401/Wetland Ecology Unit, Columbus, Ohio.
- U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0, ed. J. F. Berkowitz, J. S. Wakeley, R. W. Lichvar, C. V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.









ATTACHMENT A

REPRESENTATIVE PHOTOGRAPHS



PHOTOGRAPHIC RECORD

Client Name:

Site Location:

Project No.

AEP Ohio Transco

Nottingham-Freebyrd 138 kV Project

60423051

Photo No. 1

Date:

October 7, 2015

Description:

Pond 1

Typical pond along the route.



Photo No. 2

Date:

October 7, 2015

Description:

Wetland 1

Typical PEM Wetland





PHOTOGRAPHIC RECORD

Client Name:

Site Location:

Project No.

AEP Ohio Transco

Nottingham-Freebyrd 138 kV Project

60423051

Photo No. 3

Date:

October 7, 2015

Description:

Wetland 3

PSS/PEM Wetland

Category 1



Photo No. 4

Date:

October 7, 2015

Description:

Stream 1

Perennial stream



ATTACHMENT B

ORAM WETLAND FORMS

Site: Nottingham		Rater(s):		Date:
			W-Md	t-160715-5
	etric 1. Wetland A ect 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)	re.) 20.2ha) (5 pts) ha) (4 pts) a) (3 pts) .2ha) (2pts) :0.12ha) (1 pt)	We:	+ 165715-5
M	etric 2. Upland bu	ıffers and surrou	nding land use.	
max 14 pts. subtotal 2a.	Calculate average buffer width. WIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use VERY LOW. 2nd growth of LOW. Old field (>10 years MODERATELY HIGH. Re	Select only one and assign sco om (164ft) or more around wetla 225m to <50m (82 to <164ft) ar 3e 10m to <25m (32ft to <82ft) 4e average <10m (<32ft) around v	are. Do not double check. and perimeter (7) cound wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) and average. n, wildlife area, etc. (7) conservation tillage, new fall	
9 0 M	letric 3. Hydrology	<i>/</i> .		
max 30 pts. subtotal 3a.	Sources of Water. Score all tha High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la Maximum water depth. Select of the solution of the so	t apply. ace water (3) ake or stream) (5) suly one and assign score.	Part of wetland/u Part of riparian of riparian of semi- to perman Regularly inundation/sa Seasonally inundation/sa Seasonally inundation/sa Seasonally saturate check and average.	ain (1) /lake and other human use (1) upland (e.g. forest), complex (1) ur upland corridor (1) turation. Score one or dbl check. uently inundated/saturated (4) uted/saturated (3) dated (2) rated in upper 30cm (12in) (1)
7 17 N	letric 4. Habitat A	Iteration and Dev	velonment	
max 20 pts. subtotal 4a 4b	Substrate disturbance. Score o None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) Habitat development. Select or Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) Habitat alteration. Score one of	ne or double check and averag nly one and assign score. r double check and average.) Check all disturbances obs	e.	
subtotal this page	Recovered (6) Recovering (3) Recent or no recovery (1)	mowing grazing clearcutting selective cutting woody debris remova toxic pollutants	sedimentation dredging	atic bed removal

Site:	Noth	jetran	n-/reelyd	Rater(s)	1: Md1	1BCR	Date: 10/07/1
	1-7					W-mdf-1	00715-5
s ()	subtotal first p	Ī	ric 5. Special W	<i>l</i> etland	e	Wet	100715-5 -land
2001110			-		э.		
max 10 pts.	subtotal	Check	all that apply and score as ind Bog (10)	licated.			
		<u> </u>	Fen (10)				
		<u> </u>	Old growth forest (10)				
			Mature forested wetland (5	i)			
		<u> </u>	Lake Erie coastal/tributary		stricted hydi	ology (10)	
			Lake Erie coastal/tributary				
			Lake Plain Sand Prairies (0	Oak Opening	s) (10)		
			Relict Wet Prairies (10)				
		_	Known occurrence state/fe				
			Significant migratory songb				
1			Category 1 Wetland. See	Question 1 G	ualitative Ra	iting (-10)	
\subseteq	22	1,,,,,	rio C. Dianésana		d.		•
Second .	Comme Comme	7or			es, inte	erspersion, microto	opography.
max 20 pts.	subtotal		tland Vegetation Communitie	s. <u>\</u>	egetation C	ommunity Cover Scale	
		Score a	Il present using 0 to 3 scale.	_	0	Absent or comprises <0.1ha (0.24	
			Aquatic bed		1	Present and either comprises sm	-
		, `	Emergent Shrub			vegetation and is of moderate q	
		(Forest	-	2	significant part but is of low qua	
		 	Mudflats		2.	Present and either comprises sign vegetation and is of moderate q	· · · · · · · · · · · · · · · · · · ·
		-	Open water			part and is of high quality	daily or comprises a small
			Other	_	3	Present and comprises significant	t part, or more, of wetland's
			izontal (plan view) Interspersion	on.		vegetation and is of high quality	
		Select o					
			High (5)	N		scription of Vegetation Quality	
			Moderately high(4) Moderate (3)		low	Low spp diversity and/or predomin	
		0	Moderately low (2)	_	mod	disturbance tolerant native spec	and the same of th
			Low (1)		mou	Native spp are dominant compone although nonnative and/or distu	
		\perp	None (0)			can also be present, and specie	
		6c. Cov	erage of invasive plants. Ref	er		moderately high, but generally w	
		to Table	1 ORAM long form for list. A	\dd		threatened or endangered spp	,
		or deduc	ct points for coverage		high	A predominance of native species	
		<u> </u>	Extensive >75% cover (-5)			and/or disturbance tolerant nativ	
			Moderate 25-75% cover (-3)		absent, and high spp diversity a	
		\	Sparse 5-25% cover (-1) Nearly absent <5% cover (0			the presence of rare, threatened	i, or endangered spp
		-	Absent (1)	•	udflat and (Open Water Class Quality	
		6d. Mici	rotopography.	141	0	Absent <0.1ha (0.247 acres)	
			I present using 0 to 3 scale.	-	1	Low 0.1 to <1ha (0.247 to 2.47	
			Vegetated hummucks/tussu	ıcks	2	Moderate 1 to <4ha (2.47 to	
		7	Coarse woody debris >15cn		3	High 4ha (9.88 acres) or more	
		3 🗖	Standing dead >25cm (10in				
		2	Amphibian breeding pools	M		phy Cover Scale	
						Absent	
					1	Present very small amounts or if n	nore common
	A			_	2	of marginal quality Present in moderate amounts, but	not of highest
Cat	- 1				~	quality or in small amounts of high	
Carl	***************************************			_	3	Present in moderate or greater an	
						9 1-1	

GRAND TOTAL (max 100 pts)

last revised 1 February 2001 jjm
ORAM v. 5.0 Field Form Quantitative Rating

subtotal this page

Site: Nothing	from Freeliged	Rater(s): nat /	BCR	Date: 10/01/15
16			W-Mdt	-100715-6 Hand 2
subtotal first p	age		1.1.1	2121 7
0 16	Metric 5. Special V	Vetlands	Wea	186/01
max 10 pts. subtotal	Check all that apply and score as in			
max 10 pts. subtotal	Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/f	5) v wetland-unrestricted hydrok v wetland-restricted hydrology (Oak Openings) (10) ederal threatened or endango bird/water fowl habitat or use	y (5) crod species (10) age (10)	
	Category 1 Wetland. See	Question 1 Qualitative Ratir	ıg (-10)	
4 20	Matric G Dient com			
	Metric 6. Plant con			pograpny.
max 20 pts. subtotal	6a. Wetland Vegetation Communiti		mmunity Cover Scale	
	Score all present using 0 to 3 scale.		bsent or comprises <0.1ha (0.24	
	Aquatic bed / Emergent	1 P	Present and either comprises sma	
	Shrub	İ	vegetation and is of moderate quesignificant part but is of low quali	
	Forest	2 P	Present and either comprises sign	
	Mudflats	- '	vegetation and is of moderate qu	
	Open water		part and is of high quality	anny or complicate a cinal
	Other	3 P	Present and comprises significant	part, or more, of wetland's
	6b. horizontal (plan view) Interspers		vegetation and is of high quality	
	Select only one.			
	High (5)		ription of Vegetation Quality	
	Moderately high(4)	low L	ow spp diversity and/or predomin	
	Moderate (3) Moderately low (2)		disturbance tolerant native speci-	
	Moderately low (2) Low (1)	mod N	lative spp are dominant compone	
	X None (0)		although nonnative and/or disturb	
	6c. Coverage of invasive plants. Re	afor	can also be present, and species	-
	to Table 1 ORAM long form for list.	The state of the s	moderately high, but generally was threatened or endangered spp	70 presence or rare
	or deduct points for coverage		predominance of native species,	with nonnative spp
	Extensive >75% cover (-5		and/or disturbance tolerant native	
	Moderate 25-75% cover (-		absent, and high spp diversity an	
	Sparse 5-25% cover (-1)		the presence of rare, threatened,	
	Nearly absent <5% cover	(0)		
	X Absent (1)		oen Water Class Quality	
	6d. Microtopography.		bsent <0.1ha (0.247 acres)	
	Score all present using 0 to 3 scale.		ow 0.1 to <1ha (0.247 to 2.47	
	Vegetated hummucks/tuss		loderate 1 to <4ha (2.47 to	
	Coarse woody debris >15c Standing dead >25cm (10		igh 4ha (9.88 acres) or more	
	2 Amphibian breeding pools	-	hy Cover Scale	
			bsent	
			resent very small amounts or if m	nore common
		i i	of marginal quality	= = · · · · · · · · · · · ·
· 1 /	1		resent in moderate amounts, but	not of highest
/ +			quality or in small amounts of hig	· ·

20

GRAND TOTAL (max 100 pts)

3

Present in moderate or greater amounts

ORAM v.	5.0 Field Form Quantitative Ratio	ng	\$P	W-MOT-100715-	4
Site:	Nottingham - Freely	and Rater(s): M	at/BCR	Date: 10/	07/15
max 6 pts.	Select one size class >50 acres 25 to <50 at 10 to <25 at 3 to <10 at >10 at >1	Vetland Area (size). s and assign score. (>20.2ha) (6 pts) acres (10.1 to <20.2ha) (5 pts) acres (4 to <10.1ha) (4 pts) cres (1.2 to <4ha) (3 pts) icres (0.12 to <1.2ha) (2pts) s acres (0.04 to <0.12ha) (1 pt) (0.04ha) (0 pts)		Wetland 3	
max 14 pts	2a. Calculate average WIDE. But MEDIUM. NARROW VERY NAI 2b. Intensity of surrous VERY LOV. NODERA	pland buffers and some period of the plane buffer width. Select only one and offers average 50m (164ft) or more at Buffers average 25m to <50m (82 to 164ft). Buffers average 10m to <25m (32 RROW. Buffers average <10m (<32 punding land use. Select one or do N. 2nd growth or older forest, prairief ifield (>10 years), shrubland, young TELY HIGH. Residential, fenced papan, industrial, open pasture, row creater and sean, industrial, open pasture, row creater and sean.	I assign score. Do not iround wetland perime o <164ft) around wetla of to <82ft) around wetland perime of the check and average, savannah, wildlife a second growth forest. sture, park, conservati	t double check. ter (7) and perimeter (4) tland perimeter (1) rimeter (0) ge. rea, etc. (7) (5) ion tillage, new fallow field. (3)	
max 30 pts	High pH g Other grou Precipitati Seasonal/ Perennial 3c. Maximum water >0.7 (27.6 0.4 to 0.7r × <0.4m (<1 3e. Modifications to None or n Recovered Recoverin	er. Score all that apply. roundwater (5) undwater (3) on (1) Intermittent surface water (3) surface water (lake or stream) (5) depth. Select only one and assign in) (3) n (15.7 to 27.6in) (2) 5.7in) (1) natural hydrologic regime. Score or one apparent (12) Check all distured (7)	3d. Dura score.	nectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and other he Part of wetland/upland (e.g. fores Part of riparian or upland corridor tion inundation/saturation. Score of Semi- to permanently inundated/s Regularly inundated/saturated (3) Seasonally inundated (2) Seasonally saturated in upper 30d d average. point source (nonstormwater) filling/grading road bed/RR track dredging other Manual Allow All	t), complex (1) (1) ne or dbl check. saturated (4)
max 20 pts	s. subtotal 4a. Substrate distur None or n Recoveren Recoverin Recent or Ab. Habitat develop Excellent Very good Good (5) Moderatel Fair (3) Poor to fa Poor (1) 4c. Habitat alteratio None or n Recoveren Recoveren Recoveren	no recovery (1) ment. Select only one and assign s (7) (6) y good (4) ir (2) n. Score one or double check and a one apparent (9) d (6) g (3) no recovery (1) Check all distur mowing grazing clearcuttin selective of	and average. core. bances observed g cutting oris removal	shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment	

last revised 1 February 2001 jjm ORAM v. 5.0 Field Form Quantitative Rating

Site:	Notto	med	ram-Freel	w.A.	Rater(s): Adt	lbcR Date: 1	0/07/15
	00,5		1				W-Mdt-10071 Wetland	5-4
D	subtotal first p	Ĭ	etric 5. S	necial V	Vetlan	de	Wetland;	3
may 10 pts						us.		
max 10 pts.	subtotal	Che	Lake Erie c Lake Erie c Lake Plain Relict Wet I Known occi	forest (10) sted wetland (oastal/tributan oastal/tributan Sand Prairies Prairies (10)	5) y wetland-ur y wetland-re (Oak Openi Gederal threa gbird/water f	stricted hydro ngs) (10) itened or enda owl habitat or	angered species (10) usage (10)	
3	25,5	4	— etric 6. P	lant con	nmuni	ties, int	erspersion, microtopograp	hy.
max 20 pts.	subtotal		Wetland Vegetati				Community Cover Scale	
		500	re all present usin Aquatic bed	_		0	Absent or comprises <0.1ha (0.2471 acres) com	
		#1001%	Emergent Shrub	•		'	Present and either comprises small part of wetle vegetation and is of moderate quality, or com- significant part but is of low quality	
		3	Forest			2	Present and either comprises significant part of	wetland's
			Mudflats				vegetation and is of moderate quality or comp	rises a small
			Open water				part and is of high quality	
		Gh	Other	iou) Interener	<u></u>	3	Present and comprises significant part, or more	, of wetland's
			horizontal (plan vect only one.	ew) interspers	sion.		vegetation and is of high quality	And the second and the second and the second
		0010	High (5)			Narrative D	escription of Vegetation Quality	
			Moderately	high(4)		low	Low spp diversity and/or predominance of nonn	ative or
			Moderate (3	3)			disturbance tolerant native species	
		2,	Moderately	low (2)		mod	Native spp are dominant component of the vege	
			Low (1)				although nonnative and/or disturbance toleran	
		60	None (0)	sivo planta D	ofor		can also be present, and species diversity mo	
			Coverage of invas able 1 ORAM long				moderately high, but generally w/o presence of threatened or endangered spp	л гаге
			educt points for co		Auu	high	A predominance of native species, with nonnative	ve snn
		J. J.		75% cover (-5)	,g.,	and/or disturbance tolerant native spp absent	
				5-75% cover (-	•		absent, and high spp diversity and often, but r	•
		3	Sparse 5-25	5% cover (-1)			the presence of rare, threatened, or endanger	-
		/		nt <5% cover	(0)			
			Absent (1)				Open Water Class Quality	
			Microtopography.			0	Absent <0.1ha (0.247 acres)	
		Scor	re all present using	-		1	Low 0.1 to <1ha (0.247 to 2.47	
				ummucks/tus dy debris >15		3	Moderate 1 to <4ha (2.47 to	
				ad >25cm (10			High 4ha (9.88 acres) or more	
		į		preeding pools	•	Microtopoa	raphy Cover Scale	
			· · · · · · · · · · · · · · · · · · ·	Q 1		0	Absent	
						1	Present very small amounts or if more common	
							of marginal quality	
1	7 /					2	Present in moderate amounts, but not of highes	t
(at 1						quality or in small amounts of highest quality	
***						3	Present in moderate or greater amounts	

GRAND TOTAL (max 100 pts)

Present in moderate or greater amounts

Site: No	theregham-Freeliged	Rater(s): MOT/BCR	Date:
			W-mot-100715-3
2 2	Metric 1. Wetland	Area (size).	**
max 6 pts. subt	Select one size class and assign s >50 acres (≥20.2ha) (6) 25 to <50 acres (10.1 to 10 to <25 acres (4 to <1 3 to <10 acres (1.2 to <0 0.3 to <3 acres (0.12 to 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 p	ots) <20.2ha) (5 pts) 0.1ha) (4 pts) 4ha) (3 pts) <1.2ha) (2pts) o <0.12ha) (1 pt)	W-Mot-100715-3 Wetland 4
2 4	Metric 2. Upland b	ouffers and surrounding	a land use.
max 14 pts. subt	2a. Calculate average buffer widt WIDE. Buffers average MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. 2nd growt LOW. Old field (>10 ye MODERATELY HIGH.	h. Select only one and assign score. Do not 50m (164ft) or more around wetland perimage 25m to <50m (82 to <164ft) around wetlarge 10m to <25m (32ft to <82ft) around wetlars average <10m (<32ft) around wetland peuse. Select one or double check and averagh or older forest, prairie, savannah, wildlife arars), shrubland, young second growth forest Residential, fenced pasture, park, conserval, open pasture, row cropping, mining, constitutions.	of double check. eter (7) land perimeter (4) etland perimeter (1) erimeter (0) age. area, etc. (7) t. (5) tion tillage, new fallow field. (3)
10 1	Metric 3. Hydrolog	av.	
max 30 pts. subt	3a. Sources of Water. Score all factors of Water. Score al	hat apply.) urface water (3) (lake or stream) (5) 3d. Duration of the property of the prope	nectivity. 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) ation 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) and average.
	None or none apparent Recovered (7) Recovering (3) Recent or no recovery (weir	point source (nonstormwater) ≾ filling/grading road bed/RR track dredging • . ✓ other
6 2	◯ Metric 4. Habitat A	Alteration and Developr	nent.
max 20 pts. subt	4a. Substrate disturbance. Score None or none apparent 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) 4c. Habitat alteration. Score one	one or double check and average. (4) 1) only one and assign score. or double check and average.	
2 subtotal	None or none apparent Recovered (6) Recovering (3) Recent or no recovery (shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient enrichment

Site:		R	ater(s):		Date:
St	ZO	age		W-ndt 100 Wetland	715-3
0	20	Metric 5. Special We	etlands.	Wetland	4
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 wetlake Erie coastal/tributary wetlake Plain Sand Prairies (Oat Relict Wet Prairies (10) Known occurrence state/fede Significant migratory songbire Category 1 Wetland. See Qu	etland-unrestricted hydrological strand-restricted hydrological (10) eral threatened or endand/water fowl habitat or u	ogy (5) ngered species (10) usage (10)	
	16	 Metric 6. Plant comr			pography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communities.	· · · · · · · · · · · · · · · · · · ·	Community Cover Scale	1 5 1 7
711071 20 pts.	oustoru.	Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	71 acres) contiguous area
		Aquatic bed	1	Present and either comprises sma	
		Emergent		vegetation and is of moderate qu	
		Shrub		significant part but is of low qual	
		Forest	2	Present and either comprises sign	
		Mudflats		vegetation and is of moderate qu	
		Open water		part and is of high quality	,
		Other	3	Present and comprises significant	part, or more, of wetland's
		6b. horizontal (plan view) Interspersion		vegetation and is of high quality	
		Select only one.			
		Ḥigh (5)	Narrative De	scription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predomin	ance of nonnative or
		() Moderate (3)		disturbance tolerant native speci	ies
		Moderately low (2)	mod	Native spp are dominant compone	ent of the vegetation,
		Low (1)		although nonnative and/or distur	bance tolerant native spp
		X None (0)		can also be present, and species	s 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	
		Extensive >75% cover (-5)		and a discurbance tolerant nativ	
		Moderate 25-75% cover (-3)		absent and high spp diversity ar	•
	None	Sparse 5-25% cover (-1)		the presence of rare, threatened	, 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	
		Vegetated hummucks/tussuc		Moderate 1 to <4ha (2.47 to High 4ha (9.88 acres) or more	
		Coarse woody debris >15cm	· · /	High 4ha (9.86 acres) or more	
		Standing dead >25cm (10in) Amphibian breeding pools		aphy Cover Scale	
			<u>iviicrotopogr</u> 0	Absent	
				Present very small amounts or if n	nore common
			1	of marginal quality	,o,o oommon
	, 4		2	Present in moderate amounts, but	not of highest
1	1-1	augum.	_	quality or in small amounts of hig	
6	al -		3	Present in moderate or greater am	

GRAND TOTAL (max 100 pts) Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

last revised 1 February 2001 jjm

W-Met-100715-Z. ORAM v. 5.0 Field Form Quantitative Rating Rater(s): MOT /RC Date: Wetland 5 Metric 1. Wetland Area (size). Select one size class and assign score. max 6 pts >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) 6 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. 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), shrubland, 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) Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. Semi- to permanently inundated/saturated (4) 3c. Maximum water depth. Select only one and assign score. >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) 3e. Modifications to natural hydrologic regime. Score one or double check and average. Check all disturbances observed None or none apparent (12) Recovered (7) ditch point source (nonstormwater) Recovering (3) tile filling/grading Recent or no recovery (1) dike road bed/RR track weir dredging stormwater input other 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) 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) Habitat alteration. Score one or double check and average. None or none apparent (9) Check all disturbances observed Recovered (6) mowing shrub/sapling removal 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

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ORAM v. 5.0 Field Form Quantitative Rating

Site:		Rater(s):	Date:
	1		
34			W-Mdt-100715-Z
subtotal first pa	age		Wetter >
0 34	 Metric 5. Special W	atlande	
max 10 pts. subtotal	Check all that apply and score as indi		
·	Bog (10)		
	Fen (10) Old growth forest (10)		
	Mature forested wetland (5))	
	Lake Erie coastal/tributary	•	
	Lake Erie coastal/tributary	-	logy (5)
	Lake Plain Sand Prairies (C	Dak Openings) (10)	
	Known occurrence state/fee	deral threatened or ende	angered species (10)
	Significant migratory songb		- · ·
	Category 1 Wetland. See 0	Question 1 Qualitative R	ating (-10)
1 25			
25			erspersion, microtopography.
max 20 pts. subtotal	6a. Wetland Vegetation Communities Score all present using 0 to 3 scale.	s. <u>Vegetation</u> 0	Community Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous area
	Aquatic bed	1	Present and either comprises small part of wetland's
	Emergent		vegetation and is of moderate quality, or comprises a
	/ Shrub	and an income of the second of	significant part but is of low quality
	Forest Mudflats	2	Present and either comprises significant part of wetland's 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
	6b. horizontal (plan view) Interspersion	on.	vegetation and is of high quality
	Select only one.	Norrativa D	escription of Vegetation Quality
	High (5) Moderately high(4)	low	Low spp diversity and/or predominance of nonnative or
	Moderate (3)		disturbance tolerant native species
	Moderately low (2)	mod	Native spp are dominant component of the vegetation,
	Low (1)		although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to
	None (0) 6c. Coverage of invasive plants. Ref	fer	moderately high, but generally w/o presence of rare
	to Table 1 ORAM long form for list. A		threatened or endangered spp
	or deduct points for coverage	high	A predominance of native species, with nonnative spp
	Extensive >75% cover (-5)	N	and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always,
	Moderate 25-75% cover (-3 Sparse 5-25% cover (-1)))	the presence of rare, threatened, or endangered spp
960	Nearly absent <5% cover (6		
	Absent (1)		d Open Water Class Quality
	6d. Microtopography.	<u>0</u>	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47
	Score all present using 0 to 3 scale. Vegetated hummucks/tuss	And the state of t	Moderate 1 to <4ha (2.47 to
	Coarse woody debris >15cl	<u> </u>	High 4ha (9.88 acres) or more
	Standing dead >25cm (10ir	•	
	Amphibian breeding pools		raphy Cover Scale Absent
		01	Present very small amounts or if more common
			of marginal quality
/ 1 7		2	Present in moderate amounts, but not of highest
(nt s	Titola.	3	quality or in small amounts of highest quality Present in moderate or greater amounts

35

GRAND TOTAL (max 100 pts)

ORAM v. 5.0 Field Form Quantitative Rating Site: Rater(s): MOT/BCR Metric 1. Wetland Area (size). Select one size class and assign score. subtotal max 6 pts >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. WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrubland, 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. subtotal 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. max 30 pts 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) Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. Maximum water depth. Select only one and assign score. Semi- to permanently inundated/saturated (4) 3c. >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) X <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) 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 stormwater input other Metric 4. Habitat Alteration and Development. max 20 pts. Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 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) Habitat alteration. Score one or double check and average. None or none apparent (9) Check all disturbances observed Recovered (6) mowing shrub/sapling removal 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

Site:			T F	Rater(s):		Date:
	27.5				W	-MOT-100715-1 Wetland 6
su	btotal first pa	age				wetland 6
\bigcirc	22.5	ا ام	ric 5. Special We	atlande		
max 10 pts.	subtotal	d	all that apply and score as indic			
			Bog (10)			
			Fen (10) Old growth forest (10)			
			Mature forested wetland (5)			
			Lake Erie coastal/tributary w	etland-unrestricted	hydrology (10)	
			Lake Erie coastal/tributary w	•	drology (5)	
			Lake Plain Sand Prairies (Oa Relict Wet Prairies (10)	ak Openings) (10)		
		\vdash	Known occurrence state/fed	eral threatened or e	ndangered species (10)	
		<u> </u>	Significant migratory songbi		• , ,	,
			Category 1 Wetland. See Q	uestion 1 Qualitative	e Rating (-10)	
_3	19.5] Met	ric 6. Plant com	munities, ii	nterspersion	, microtopography.
max 20 pts.	subtotal	-	etland Vegetation Communities		on Community Cover	
		Score	all present using 0 to 3 scale.	0		ses <0.1ha (0.2471 acres) contiguous area
		_	Aquatic bed	1	•	r comprises small part of wetland's
			Emergent Shrub			s of moderate quality, or comprises a out is of low quality
			Forest	2		r comprises significant part of wetland's
			Mudflats		vegetation and i	s of moderate quality or comprises a small
			Open water		part and is of hig	
		6h h0	OtherOtherOtherspersion	3	Present and comp	orises significant part, or more, of wetland's
			only one.		r vegetation and i	5 of high quanty
		Г	High (5)	<u>Narrative</u>	Description of Veget	ation Quality
			Moderately high(4)	low		and/or predominance of nonnative or
		\mathcal{O}	Moderate (3)			rant native species
		~ F	Moderately low (2) Low (1)	mod		minant component of the vegetation, ive and/or disturbance tolerant native spp
		5	None (0)			sent, and species diversity moderate to
			verage of invasive plants. Refe			, but generally w/o presence of rare
			e 1 ORAM long form for list. Ac		threatened or en	
		or ded	uct points for coverage Extensive >75% cover (-5)	high	•	of native species, with nonnative spp
		H	Moderate 25-75% cover (-3)			n spp diversity and often, but not always,
	***	SE	Sparse 5-25% cover (-1)			rare, threatened, or endangered spp
		gal)	Nearly absent <5% cover (0)			
			Absent (1)		and Open Water Class	
			crotopography. all present using 0 to 3 scale.	<u>0</u> 1	Absent <0.1ha (0 Low 0.1 to <1ha (0	
		Г	Vegetated hummucks/tussu	Marine Transport	Moderate 1 to <4	
		2 F	Coarse woody debris >15cm		High 4ha (9.88 ac	
		- L	Standing dead >25cm (10in)			
		L	Amphibian breeding pools	Microtop 0	Absent	
				1		Il amounts or if more common
		11		•	of marginal qual	
,	Lat	1		2	l l	ate amounts, but not of highest
(JA1			3		all amounts of highest quality
				•	resentin manar	ne u creater addutius



ORAM v. 5.0 Field For	m Quantitative Rating			
Site:	John gliam Fredoria	Rater(s): 김유이/용	KE/BUR	Date: /-20-15
	U J		w-bao-	012015-1
	Metric 1. Wetland A	rea (size). 🔑 🥏		
·	Select one size class and assign scores (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20 10 to <25 acres (4 to <10.1 to <0.3 acres (1.2 to <4ha) 0.3 to <3 acres (0.12 to <1.2 to <0.1 acres (0.04 to <0.1 acres (0.04 to <0.1 acres (0.04ha) (0 pts)	· (3 pts) 2ha) (2pts)	al Name,	Wetland 7
1 3	Metric 2. Upland bu	ffers and surrou	nding land use	
max 14 pis subtotal	2a. Calculate average buffer width. S WIDE. Buffers average 50n MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. 2nd growth of LOW. Old field (>10 years)	Select only one and assign scome (164ft) or more around wetla 25m to <50m (82 to <164ft) are 10m to <25m (32ft to <82ft) average <10m (<32ft) around was Select one or double check older forest, prairie, savannah, shrubland, young second grosidential, fenced pasture, park,	re. Do not double check. nd perimeter (7) pund wetland perimeter (4) around wetland perimeter (1 vetland perimeter (0) and average. 1, wildlife area, etc. (7) wth forest. (5) conservation tillage, new fa)
10 13	Metric 3. Hydrology	,		
max 30 pts subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (lal 3c. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) 3e. Modifications to natural hydrolog None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)	apply ce water (3) ke or stream) (5) nly one and assign score. (2) ic regime. Score one or double	Part of wetland/ Part of riparian 3d. Duration inundation/sa Semi- to perma Regularly inund Seasonally inur Seasonally satu e check and average.	lain (1) I/lake and other human use (1) upland (e.g. forest), complex (1) or upland corridor (1) aturation. Score one or dbl check. nently inundated/saturated (4) ated/saturated (3) dated (2) irrated in upper 30cm (12in) (1) onstormwater) ack
13 17	Matria 4 Habitat Al	torotion and Day	volonment	Topic Control of the
max 20 pts subtotal	Metric 4. Habitat Al 4a. Substrate disturbance. Score or None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	te or double check and average	erved shrub/sapling rule herbaceous/aq sedimentation dredging	emoval uatic bed removal
aubtotal this pa	ge	toxic pollutants	nutrient enrichr	nent

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ORAM v. 5.0 Field Form Quantitative Rating



Site:	Vodelo	Pan-fiebud Rater	(s): BAO	BAELECR.	Date: \-20-15
SI	/7 ubtotal first p	ige	\cap		0012015-1
6	17	Metric 5. Special Wetlan	nds /lef	on f. Ager &	
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-take Erie coastal/tributary wetland-r	unrestricted hydro		Wetland 7
		Lake Plain Sand Prairies (Oak Oper Relict Wet Prairies (10) Known occurrence state/federal thre Significant migratory songbird/water Category 1 Wetland. See Question	eatened or enda fowl habitat or	usage (10)	
\	18	Metric 6. Plant commun			rotopography.
max 20 pts	subtotal	6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.	Vegetation 0	Community Cover Scale	(0.2474
		Aquatic bed Emergent Shrub	1	Present and either compris	erate quality, or comprises a
		Forest Mudflats Open water	2	Present and either comprise vegetation and is of modern part and is of high quality	ses significant part of wetland's erate quality or comprises a small
		Other	3		nificant part, or more, of wetland's
		6b. horizontal (plan view) Interspersion Select only one.		vegetation and is of high	quality
		High (5)	Narrative D	escription of Vegetation Qu	
		Moderately high(4) Moderate (3)	low	4	edominance of nonnative or
		Moderately low (2) Low (1)	mod	although nonnative and/o	omponent of the vegetation, or disturbance tolerant native spp
		None (0) 6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add		1	species diversity moderate to erally w/o presence of rare d spp
		or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	high	and/or disturbance tolera absent, and high spp dive	species, with nonnative spp nt native spp absent or virtually ersity and often, but not always, eatened, or endangered spp
		Nearly absent <5% cover (0)	-	T the presence of face, the	satenes, or endangered app
		Absent (1)	***************************************	Open Water Class Quality	
		6d. Microtopography. Score all present using 0 to 3 scale.	1	Absent <0.1ha (0.247 acre Low 0.1 to <1ha (0.247 to 2	
		Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47	· · · · · · · · · · · · · · · · · · ·
		Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh	3	High 4ha (9.88 acres) or m	
		Amphibian breeding pools	Microtopog 0	raphy Cover Scale Absent	
\$	Same and the same		1	Present very small amount of marginal quality	s or if more common
Lut			2	Present in moderate amou quality or in small amoun	ts of highest quality
			3	Present in moderate or gre	ater amounts

∫ 分 GRAND TOTAL (max 100 pts)



	Nothingfam-Freelight Rater	(s): BAD, BAE	Date: 10/7/15
	Metric 1. Wetland Area (s	size). (U~)	20-100715-4 Wh. + land 8
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 <0.1 acres (0.04ha) (0 pts)	ots))	Whiteh 8
3 4	Metric 2. Upland buffers	and surrounding land us	e.
max 14 pts. subtotal	NARROW. Buffers average 10m to VERY NARROW. Buffers average 2b. Intensity of surrounding land use. Select of VERY LOW. 2nd growth or older fore LOW. Old field (>10 years), shrublant MODERATELY HIGH. Residential, for the surrounding land use. Select of the surro	or more around wetland perimeter (7) 50m (82 to <164ft) around wetland perimeter (4 <25m (32ft to <82ft) around wetland perimeter 10m (<32ft) around wetland perimeter (0) one or double check and average. est, prairie, savannah, wildlife area, etc. (7)	4) (1)
(0 10	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 (Perennial surface water (lake or streated) 3c. Maximum water depth. Select only one and >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. None or none apparent (12) Check	Part of wetlan Part of riparia am) (5) d assign score. Semi- to perm Regularly inui Seasonally in Seasonally sa Score one or double check and average.	dplain (1) am/lake and other human use (1) ad/upland (e.g. forest), complex (1) in or upland corridor (1) /saturation. Score one or dbl check nanently inundated/saturated (4) indated/saturated (3) undated (2) aturated in upper 30cm (12in) (1)
	Recovering (3) Recent or no recovery (1)	le	
5.5 15,5	Metric 4. Habitat Alterati	-	
max 20 pts. subtotal	4a. Substrate disturbance. Score one or doub None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and 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 che	l assign score.	
15,5 subtotal this	Recovered (6) Recovering (3) Recent or no recovery (1) Recovered (6) Recovering (3) Recovering (3) Recovering (3) Recovering (3) Recovering (3)	nowing shrub/sapling	aquatic bed removal n

last revised 1 February 2001 jjm ORAM v. 5.0 Field Form Quantitative Rating

Site:	AEP,	Notti	whilliam - VACEBYRD	Rater(s): BAD	BAE	Date: /0/02/15
	15.5						W-BAD-100715-
	subtotal first p	age					21112
₽.	150	1			_		Vetlant D
U	100		tric 5. Special		ds.		
max 10 pts.	subtotal	Check	all that apply and score as	indicated.			
		F	Bog (10) Fen (10)				
		F	Old growth forest (10)				•0
			Mature forested wetland				.
		<u> </u>	Lake Erie coastal/tributa				
		-	Lake Erie coastal/tributa Lake Plain Sand Prairie		•	ogy (5)	
		-	Relict Wet Prairies (10)	o (oun opom	90) (10)		
			Known occurrence state			• , , ,	
		 	Significant migratory so	-		• ,	
	2 000	, ∟	Category 1 Wetland. Se	ee Question	Qualitative R	ating (-10)	
2	175	l Me	tric 6 Plant co	mmuni	tios int	erspersion, microt	onogranhy
max 20 pts.	subtotal		etland Vegetation Commun			Community Cover Scale	opograpny.
			all present using 0 to 3 scal		0	Absent or comprises <0.1ha (0.3	2471 acres) contiguous area
			Aquatic bed		1	Present and either comprises sr	
		. -	∖ Emergent Shrub			vegetation and is of moderate	
		1	Forest		2	significant part but is of low queries and either comprises si	
		<u> </u>	Mudflats		_	vegetation and is of moderate	
			Open water		*******	part and is of high quality	
		6h ha	Other prizontal (plan view) Interspe	raion	3	Present and comprises significa	
			only one.	rision.		vegetation and is of high quali	<u>ty</u>
			High (5)		Narrative De	scription of Vegetation Quality	
			Moderately high(4)		low	Low spp diversity and/or predom	
		F	Moderate (3) Moderately low (2)		mad	disturbance tolerant native spe	
		-	Low (1)		mod	Native spp are dominant compo although nonnative and/or dist	
			None (0)			can also be present, and spec	
			overage of invasive plants.			moderately high, but generally	
			le 1 ORAM long form for list uct points for coverage	. Add	high	threatened or endangered spp	
		Г	Extensive >75% cover (-	-5)	mgn	A predominance of native specie and/or disturbance tolerant native	
			Moderate 25-75% cover	•		absent, and high spp diversity	
			Sparse 5-25% cover (-1)			the presence of rare, threatene	ed, or endangered spp
		F	Nearly absent <5% cove Absent (1)	r (0)	Mudflat and	Open Water Class Quality	
		6d. Mi	crotopography.		0	Absent <0.1ha (0.247 acres)	-
		Score a	all present using 0 to 3 scale		1	Low 0.1 to <1ha (0.247 to 2.47	-
			Vegetated hummucks/tu		2	Moderate 1 to <4ha (2.47 to	
		, -	Coarse woody debris >1 Standing dead >25cm (1		3	High 4ha (9.88 acres) or more	-
			Amphibian breeding poo		Microtopoar	aphy Cover Scale	
			. 5		0	Absent	
					1	Present very small amounts or if	more common
d					2	of marginal quality	ut not of highest
TI					4	Present in moderate amounts, b quality or in small amounts of I	-

CAT.1



GRAND TOTAL (max 100 pts)

Present in moderate or greater amounts

ORAM v. s	5.0 Field F	orm C	Quantitative	Rating							W. 8	AO-100715-	03,
Site:	AKP N	07711	NHAM-	FRABURD	Rate	er(s):	BAO,	PNA			Date:	10/09/10	
max 6 pts.	subtotal	J	>50 a >50 a 25 to 10 to 3 to < 0.3 to	class and assign sacres (>20.2ha) (6) <50 acres (10.1 to <25 acres (4 to <1 to <10 acres (0.12 to <0 <3 acres (0.04 to acres (0.04 to acres (0.04ha) (0 p	score. ots) <20.2ha) 0.1ha) (4 r 4ha) (3 pts <1.2ha) (2 to <0.12ha)	(5 pts) ots) pts)).			Wet	-land	9/9A	
2	2	Me	etric 2	. Upland b	ouffer	s and	surro	undii	ng la	and use	€.		
max 14 pts.	subtotal		WIDE MED NARI VER' Intensity of LOW MOD	average buffer widt E. Buffers average IUM. Buffers avera ROW. Buffers ave Y NARROW. Buffer surrounding land of Y LOW. 2nd growt . Old field (>10 ye ERATELY HIGH. I. Urban, industria	50m (164) age 25m to rage 10m ers average use. Sele h or older h ars), shrub Residentia	ff) or more o <50m (8 to <25m e <10m (< ct one or forest, pra bland, you al, fenced	e around we 2 to <164ft) (32ft to <82 32ft) aroundouble chechire, savanr ng second g pasture, pa	etland per around w ft) around d wetland ck and aven ah, wildli growth for rk, conse	rimeter (wetland d wetlan d perime verage. ife area, rest. (5)	(7) perimeter (4) d perimeter (6) eter (0) etc. (7) tillage, new f	1))	
7	9	Me	etric 3	. Hydrolog	gy.								
max 30 pts.	subtotal] 3c.	High Othe Preci Seas Pere Maximum v >0.7 0.4 to <0.4f Modificatio None Reco	Water. Score all the pH groundwater (3) represented from the pH groundwater (3) pitation (1) onal/Intermittent sunnial surface water water depth. Select (27.6in) (3) to 0.7m (15.7 to 27.m (<15.7in) (1) insight to natural hydropered (7) evering (3) ent or no recovery (4)	urface water (lake or storolly one 6in) (2) check (12) Check (12)	ne. Score eck all dis ditch tile dike weir	ın score.	3d. E	Duration See See k and an order of fill	on year flood petween streat of wetland art of riparian inundation/semi- to permipeasonally inuneasonally inuneasonally safe yerage.	m/lake and o d/upland (e.g. or upland co saturation. S anently inund dated/saturat ndated (2) urrated in upp	ther human use (forest), complex orridor (1) core one or dbl clated/saturated (4 ed (3) per 30cm (12in) (12in)	(1) heck. 4)
5.5	14.5	M	etric 4	. Habitat	Altera	tion a	and De	evelo	pme	nt.			
max 20 pts.	subtotal /	4b.	None Recc Recc Habitat de Exce Very Good Modd Fair Poor Habitat alte	erately good (4) (3) to fair (2)	only one a or double (9)	check an eck all dis mowing grazing clearcut selectiv	d average. turbances of	bserved	he se	nrub/sapling erbaceous/ac edimentation redging urming utrient enrich	quatic bed re	moval	

						W	-BAO-100715-03
Site:				Rater(s):	BAC	1/B AE	Date: 10/07/15
SI	14.5 ubtotal first p	age			<i>,</i> /	,	wetland 9/91
0	145	Met	ric 5. Special W	/etlands			
max 10 pts.	subtotal	4	all that apply and score as inc Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (10) Known occurrence state/fe Significant migratory songl Category 1 Wetland. See	dicated. wetland-unrest wetland-restric Oak Openings) oderal threatene bird/water fowl I	ricted hyd ted hydrol (10) nd or enda nabitat or i	ngered species (10) usage (10)	
2	14.5		– ric 6. Plant com	nmunitie	s, inte	erspersion, microt	opography.
max 20 pts.	subtotal		etland Vegetation Communitie	es. <u>Ve</u>		Community Cover Scale	
		Score	all present using 0 to 3 scale. Aquatic bed		0 1	Absent or comprises <0.1ha (0.2	
			Emergent Shrub		1	Present and either comprises sm vegetation and is of moderate significant part but is of low qua	quality, or comprises a
			Forest	***************************************	2	Present and either comprises sig	
			Mudflats		_	vegetation and is of moderate	•
		┢	Open water			part and is of high quality	, a.a.,
		<u> </u>	Other	_	3	Present and comprises significar	nt part, or more, of wetland's
		6b. ho	rizontal (plan view) Interspersi	ion.		vegetation and is of high qualit	
		Select	only one.				
			High (5)	<u>Na</u>	rrative De	scription of Vegetation Quality	
			Moderately high(4)		low	Low spp diversity and/or predom	inance of nonnative or
			Moderate (3)			disturbance tolerant native spe	cies
			Moderately low (2)		mod	Native spp are dominant compor	
		6 -	Low (1)			although nonnative and/or distu	
			None (0)	_		can also be present, and speci	
			verage of invasive plants. Re			moderately high, but generally	w/o presence of rare
			1 ORAM long form for list. A lot points for coverage		I- :I-	threatened or endangered spp	20
		or dedu	Extensive >75% cover (-5)		high	A predominance of native specie	• •
		\vdash	Moderate 25-75% cover (-3)			and/or disturbance tolerant nati absent, and high spp diversity	· · · · · · · · · · · · · · · · · · ·
		-	Sparse 5-25% cover (-1)	<i>,</i>		the presence of rare, threatene	
		01	Nearly absent <5% cover (0)		the presence of fare, threatene	d, or endangered spp
		ř	Absent (1)	-	dflat and	Open Water Class Quality	
		6d. Mic	crotopography.	.,,,,	0	Absent <0.1ha (0.247 acres)	•
			Ill present using 0 to 3 scale.		1	Low 0.1 to <1ha (0.247 to 2.47	-
			Vegetated hummucks/tuss	ucks	2	Moderate 1 to <4ha (2.47 to	-
			Coarse woody debris >15c		3	High 4ha (9.88 acres) or more	M
			Standing dead >25cm (10ir				•

(m1

GRAND TOTAL (max 100 pts)

Amphibian breeding pools

Microtopography Cover Scale

ORAM v. 5.0 Field Form Quantitative Rating		W-BAO-100715-QQ
Site: AEP NOTINHIAM- (MUBURE	Rater(s): BAD, B	nac Date: 10/07/15
Metric 1. Wetland A Select one size class and assign scores (>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 < <0.1 acres (0.04ha) (0 pts)	rea (size). re. 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)	Wetland 10
MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. 2nd growth o LOW. Old field (>10 years) MODERATELY HIGH. Res	Select only one and assign scom (164ft) or more around wetle 25m to <50m (82 to <164ft) a e 10m to <25m (32ft to <82ft) average <10m (<32ft) around . Select one or double check r older forest, prairie, savanna), shrubland, young second gro	ore. Do not double check. and perimeter (7) round wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) and average. h, wildlife area, etc. (7) owth forest. (5) , conservation tillage, new fallow field. (3)
Metric 3. Hydrology 3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la 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 hydrolog None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)	apply. see water (3) ke or stream) (5) nly one and assign score. see (2) ic regime. Score one or double	
Metric 4. Habitat Al 4a. Substrate disturbance. Score or None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	teration and Devote or double check and average double check and average.	served shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging

Site:	ACP N	107/10/11	AM- FREGBURD	Rater(s):	1314-0), 13AC	Date: 10/07/15
max 10 pts.	24.5 subtotal first p 24.5 subtotal] Meti	ric 5. Special \				Wethord 10
			Fen (10) Old growth forest (10) Mature forested wetland Lake Erie coastal/tributal Lake Erie coastal/tributal Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/ Significant migratory son Category 1 Wetland. Se	ry wetland-unrestry y wetland-restrict (Oak Openings) (federal threatene gbird/water fowl h	ed hydrol (10) d or enda abitat or	ingered species (10) usage (10)	
max 20 pts.	$\partial l.5$		ric 6. Plant col			erspersion, microto	pography.
1118X 20 pts.	Subtotal		I present using 0 to 3 scale		0	Absent or comprises <0.1ha (0.24	71 acres) contiguous area
			Aquatic bed		1	Present and either comprises small	
			Emergent			vegetation and is of moderate q	
			Shrub			significant part but is of low qual	
		, E	Forest		2	Present and either comprises sign	ificant part of wetland's
			Mudflats			vegetation and is of moderate q	uality or comprises a small
			Open water			part and is of high quality	
			Other		3	Present and comprises significant	part, or more, of wetland's
			zontal (plan view) Intersper	sion.		vegetation and is of high quality	
		Select or					
			High (5)	Nar	rative De	escription of Vegetation Quality	
		<u> </u>	Moderately high(4)		low	Low spp diversity and/or predoming	nance of nonnative or
			Moderate (3)			disturbance tolerant native spec	
		,	Moderately low (2)		mod	Native spp are dominant compone	
		0	Low (1)			although nonnative and/or distur	
			None (0)			can also be present, and specie	•
			erage of invasive plants. R			moderately high, but generally w	/o presence of rare
			1 ORAM long form for list.	Add	la t a la	threatened or endangered spp	
		or deduc	t points for coverage Extensive >75% cover (-5	Ξ\	high	A predominance of native species	
			Moderate 25-75% cover (·		and/or disturbance tolerant nativ absent, and high spp diversity a	
		-5 	Sparse 5-25% cover (-1)	(-3)		the presence of rare, threatened	
		٧ 	Nearly absent <5% cover	· (0)		The presence of fare, threatened	, or endangered spp
		-	Absent (1)		lflat and	Open Water Class Quality	
		6d. Micr	otopography.	Ma	0	Absent <0.1ha (0.247 acres)	
			present using 0 to 3 scale	<u></u>	1	Low 0.1 to <1ha (0.247 to 2.47	
		П	Vegetated hummucks/tus		2	Moderate 1 to <4ha (2.47 to	
		, 	Coarse woody debris >15		3	High 4ha (9.88 acres) or more	
		'	Standing dead >25cm (10				
			Amphibian breeding pool	-	<u>rotopogr</u>	aphy Cover Scale	
		-	•		0	Absent	
					1	Present very small amounts or if n	nore common
				_		of marginal quality	
_ I	1				2	Present in moderate amounts, but	not of highest
Cat	1					quality or in small amounts of hig	·
waters	· ·				3	Present in moderate or greater am	ounte

GRAND TOTAL (max 100 pts)

ORAM v. 5.0 Field Form Quantitative Rating

Site: /	4EP-	NottineJran	Rater(s): BAO, BAE, BCR	Date: 01/21/15
max 6 pts	subtotal	Metric 1. Wetland Select one size class and assign so >50 acres (>20.2ha) (6 p 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 (0.04 to <0.1 acres (0.04ha) (0 pt	Area (size). Sore. (5) (520.2ha) (5 pts) (1ha) (4 pts) (1a) (3 pts) (1.2ha) (2pts) (0.12ha) (1 pt)	
Max 14 pls	subtotal	Metric 2. Upland b 2a. Calculate average buffer width. WIDE. Buffers average buffer width. MEDIUM. Buffers average buffer average buffer average buffers average buffers average buffer. NARROW. Buffers average buffer average buffer average buffer average buffer average buffer average buffer buffers average buffer ave	uffers and surrounding land u Select only one and assign score. Do not double checking (164ft) or more around wetland perimeter (7) are 25m to <50m (82 to <164ft) around wetland perimete (ge 10m to <25m (32ft to <82ft) around wetland perimeter (so average <10m (<32ft) around wetland perimeter (0) around everage. Or older forest, prairie, savannah, wildlife area, etc. (7) (7) s), shrubland, young second growth forest. (5) esidential, fenced pasture, park, conservation tillage, ne open pasture, row cropping, mining, construction. (1)	ck. r (4) ter (1)
max 30 pts.	subtotal		at apply. at apply. 3b. Connectivity. Scc 100 year fic Between st Part of wetl Part of ripal ake or stream) (5) 3d. Duration inundation only one and assign score. (a) (b) (c) (c) (c) (d) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	podplain (1) ream/lake and other human use (1) and/upland (e.g. forest), complex (1) rian or upland corridor (1) pon/saturation. Score one or dbl check. rmanently inundated/saturated (4) hundated/saturated (3) inundated (2) saturated in upper 30cm (12in) (1) e (nonstormwater)
max 20 pts.	2Z subtotal	4a, Substrate disturbance. Score of None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 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) Poor (1) 4c. Habitat alteration. Score one or None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Iteration and Development. ne or double check and average. Ity one and assign score. double check and average. Check all disturbances observed shrub/saplin	g removal /aquatic bed removal on

last revised 1 February 2001 jjm ORAM v. 5.0 Field Form Quantitative Rating

Site:	AEF	- Notting	hum Rate	er(s): <i>(3A)</i>	SAE BLR	Date: 01/20/15
	22					W-BADOIZOIS-E
max 10 pts.	subtotal first pi 22 subtotal	Metric 5	. Special Wetla	ands. Re	port Name:	Wetland 11
	·	Matu Lake Lake Lake Relic Know	(10) Irowth forest (10) Ire forested wetland (5) Erie coastal/tributary wetlan Erie coastal/tributary wetlan Plain Sand Prairies (Oak Oit t Wet Prairies (10) Iron occurrence state/federal t ficant migratory songbird/wa	d-restricted hydro penings) (10) hreatened or end iter fowl habitat or	angered species (10)	
2	24	I	gory 1 Wetland. See Questi		terspersion, micro	otopography.
max 20 pts.	subtotal		egetation Communities.		Community Cover Scale	, , , , , , , , , , , , , , , , , , ,
		Score all prese	nt using 0 to 3 scale.	0		(0.2471 acres) contiguous area
		Aqua Emer Shrul	-	1	Present and either comprises vegetation and is of modera significant part but is of low	ate quality, or comprises a
		Fores	st	2	Present and either comprises	
		Other		3		icant part, or more, of wetland's
			plan view) Interspersion.		vegetation and is of high qu	uality
		Select only one				
		High			escription of Vegetation Qual	ity
		boomers and	rately high(4)	low	Low spp diversity and/or pred	
		5 \ L	rate (3) rately low (2)	mod	Motive cap are deminant com	
		Low	• • •	niou	Native spp are dominant com	disturbance tolerant native spp
		X None	'		can also be present, and sp	
		6c. Coverage of	of invasive plants. Refer		moderately high, but genera	•
		to Table 1 ORA	M long form for list. Add		threatened or endangered s	· ·
		or deduct points		high	A predominance of native spe	
			sive >75% cover (-5)			native spp absent or virtually
		Spare	rate 25-75% cover (-3) se 5-25% cover (-1)			ity and often, but not always,
			y absent <5% cover (0)		the presence of rare, threat	ened, or endangered spp
		✓ Absel	• • • • • • • • • • • • • • • • • • • •	Mudflat and	Open Water Class Quality	
		6d. Microtopog	` '	0	Absent <0.1ha (0.247 acres)	PARAMETER STATE OF THE STATE OF
		Score all preser	nt using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.4	7
			tated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to	
	i	, ,	se woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	
	*	L	ling dead >25cm (10in) dbh iibian breeding pools	NAT wide as as a second	nambor Oncorn Oc. 1	
		Lampin	incian precurily pools	<u>wicrotopog</u> 0	raphy Cover Scale Absent	
				1	Present very small amounts o	or if more common
					of marginal quality	
1 +	.1			2	Present in moderate amounts	, but not of highest
Cal	9			2	quality or in small amounts of	of highest quality
					- 1 t temme more in manufacture a 4	

24 GRAND TOTAL (max 100 pts)

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

11/5/2015 2:02:17 PM

in

Case No(s). 15-1756-EL-BLN

Summary: Letter of Notification Part 2 electronically filed by Mr. Hector Garcia on behalf of AEP Ohio Transmission Company