Attachment D
L-14-399

Agency Correspondence – Section 4

Agency Correspondence – Section 4

USACE has issued a Preliminary Jurisdictional Determination for Department of Army Application No. 2014-00108 (see Appendix 4.1). In addition, USACE has prepared a Public Notice for this project (see Appendix 4.2). Additional agencies or background literature review has been conducted with the following agencies: Ohio Department of Natural Resources (ODNR), United States Fish and Wildlife Service (USFWS), Ohio Historic Preservation Office (OHPO), ODNR Office of Coastal Management. Below is a summary of these communications and literature reviews.

The ODNR has been notified of the Minor Stream Project. Coordination was initiated with ODNR on February 3, 2014 (see Appendix 4.3). A response letter was received from ODNR on February 10, 2014 (see Appendix 4.4). In the response letter, ODNR indicated that there are two records within the Perry Nuclear Power Plant (PNPP) Minor Stream Project area. These records are for the state threatened spotted turtle (*Clemmys guttata*) which was reported to be in swampy areas during the 1986 Annual Report of the Perry Plan Ecological Monitoring Program. In addition, the site was described as a notable Mixed Mesophytic Forest by the Division of Natural Areas & Preserves in 1981. The letter indicated that there are no records for the Indiana bat (*Myotis sodalis*) capture locations within a five mile radius or hibernacula within a ten mile radius of the project area.

FENOC contracted Gregory Lipps LLC to perform an endangered spotted turtle survey for the project area. This survey was conducted during April through June 2014 for the presence of endangered spotted turtle habitat and individuals. No state or federally listed amphibian or reptile species were found at the trap locations. Since the survey was completed, the project area has changed, Gregory Lipps concluded that the survey results would extend to the current project area. A copy of the report and the communication about the survey area extent are included in Appendix 4.5.

Tree and shrub clearing will be required to complete the Minor Stream Project. Approximately 14 acres of trees, will be cleared during implementation of this project. Coordination for tree removal with the USFWS was initiated on February 12, 2014 (see Appendix 4.6). A response was received on February 27, 2014 from USFWS (see Appendix 4.7). In the response, USFWS indicated that trees exhibiting characteristics of potential Indiana bat habitat should "be saved wherever possible. However, if these trees cannot be avoided, they should only be cut between October 1 and March 31...If there is a Federal nexus for the project...then no tree clearing on any portion of the parcel should occur until consultation under section 7 of the Endangered Species Act of 1973, as amended, between the Service and the Federal action agency is complete. We recommend that the Federal action agency submit to this office a determination of effects to the Indiana bat for our review and concurrence." A copy of this communication is included in Attachment C. FirstEnergy proposes seasonal clearing (between October 1, 2014 and March 31, 2015) of the potential roost trees once section 7 consultation with USFWS has concluded.

The ODNR Office of Coastal Management has been contacted regarding the Minor Stream Project. To complete the project, the outlet of the New UNT will empty from an outlet into Lake Erie. Three components are required to be submitted to the Office of Coastal Management to permit for

stream connection to Lake Erie. These components include the Coastal Consistency Certification Statement, modification (if necessary) to the existing Submerged Land Lease Agreement, and a Shore Structure Permit. The Office of Coastal Management performed a Site Assessment Report (see Appendix 4.8) for the area in which the New UNT is proposed to outlet. Coordination with the Office of Coastal Management on the above components is in progress.

EnviroScience performed an initial OHPO data review of cultural resources for the Minor Stream Project. The area searched included the study area location and a surrounding 1,000-foot buffer. The literature review included a search for records of National Register Listed Properties, National Register Listed Districts, Ohio Archaeological Inventory Properties, Ohio Historic Inventory Properties, Determinations of Eligibility, and Phase 1, 2, or 3 Survey Areas. Results are shown on the mapping and data spreadsheet located in Appendix 4.9. According to the records search, no National Register Listed Properties, National Register Listed Districts, Ohio Archaeological Inventory Properties, Ohio Historic Inventory Properties, Determinations of Eligibility, and Phase 1, 2, or 3 Survey Areas were identified within the project area or 1,000 foot buffer area.

DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

COPY

REPLY TO

September 12, 2014

Regulatory Branch

SUBJECT: Preliminary Jurisdictional Determination for Department of the Army Application No. 2014-00108

Kristin Susick
Senior Scientist
76 South Main Street
Akron, Ohio 44332

Dear Ms. Susick:

I have reviewed the wetland delineation map you submitted for the parcel located east of the Perry Nuclear Plant at 10 Center Road, in the Village of Perry, Lake County, Ohio.

I have evaluated your submitted wetland delineation map and have determined that the wetland and water boundaries shown on the map accurately represent on-site conditions. Please note that this is a Preliminary Jurisdictional Determination (JD). Preliminary JDs are non-binding written indications that there may be waters of the United States on your parcel and approximate locations of those waters. Preliminary JDs are advisory in nature and may not be appealed.

Pursuant to Regulatory Guidance Letter 08-02, any permit application made in reliance on this Preliminary JD will be evaluated as though all wetlands or waters on the site are regulated by the Corps. Further, all waters, including wetlands will be used for purposes of assessing the area of project related impacts and compensatory mitigation. If you require a definitive response regarding Department of the Army jurisdiction for any or all of the waters identified on the submitted drawings, you may request an approved jurisdictional determination from this office. If an approved jurisdictional determination is requested, please be aware that this is often a lengthy process and we may require the submittal of additional information.

I have enclosed the Preliminary JD Form with this letter. The form and attached table identifies the extent of waters on the site and specific terms and conditions of the Preliminary JD. Please sign and return a copy of this form to my attention so that I may complete my evaluation of your file. If you do not respond within fifteen days of this letter, I will assume you no longer wish to pursue the jurisdictional determination and will withdraw your application.

Regulatory Branch
SUBJECT: Jurisdictional Determination for Department of the Army Application No. 2014-00108

In accordance with Regulatory Guidance Letter 05-02, "Preliminary jurisdictional determinations are not definitive determinations of areas within regulatory jurisdiction and do not have expirations dates." However, I strongly recommend that the boundaries of waters of the United States be re-evaluated by a qualified wetland biologist after five years of the date of this letter. This will ensure that any changes are appropriately identified and you do not inadvertently incur a violation of Federal law while constructing your project or working on your project site.

Lastly, this determination has been conducted only to identify the limits of waters that may be subject to Corps Clean Water Act or Rivers and Harbors Act jurisdiction. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resource Conservation Service prior to starting work.

Questions pertaining to this matter should be directed to me at (716) 879-4363, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, or by e-mail at: Peter.j.krakowiak@usace.army.mil

Sincerely,

SIGNED

Peter J. Krakowiak
Biologist

Enclosures

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): September 11, 2014

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Kristin Susick
Senior Scientist
76 South Main Street
Akron, Ohio 44332

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB, FirstEnergy Corporation – Perry Nuclear Plant Stream Relocation, DA No. 2014-00108

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: Ohio County/parish/borough: Lake City: Perry
Center coordinates of site (lat/long in degree decimal format):
Lat. 41.80161 Long. -81.13694

Universal Transverse Mercator:

Name of nearest waterbody: Lake Erie

Identify (estimate) amount of waters in the review area:
Non-wetland waters: 7,557 linear feet: Variable width (ft) and/or acres.
Cowardin Class: Riverine
Stream Flow: Ephemeral, intermittent, and perennial
Wetlands: 46.110 acres.
Cowardin Class: PEM, PSS, PFO

Name of any water bodies on the site that have been identified as Section 10 waters:
Tidal: NA
Non-Tidal: NA

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:
☒ Field Determination. Date(s): April 24, 2014, June 25, 2014

FILE NAME, AND NUMBER: FirstEnergy Corporation – Perry Nuclear Plant, DA No. 2014-00108

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.
This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

FILE NAME, AND NUMBER: FirstEnergy Corporation – Perry Nuclear Plant, DA No. 2014-00108

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- ☐ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps: .

☐ Corps navigable waters' study: .

☐ U.S. Geological Survey Hydrologic Atlas: .
- ☐ USGS NHD data.
- ☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute Perry.

☒ USDA Natural Resources Conservation Service Soil Survey. Citation:Lake County.

☒ National wetlands inventory map(s). Cite name: 7.5 Minute Perry.

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps: .

☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date):Googlemaps (ORM2), Bing.com.

or ☐ Other (Name & Date): .

☐ Previous determination(s). File no. and date of response letter: .

☐ Other information (please specify): .

<u>IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.</u>

Signature and date of Regulatory Project Manager (REQUIRED)	Signature and date of person requesting preliminary JD (REQUIRED)

FILE NAME, AND NUMBER: FirstEnergy Corporation – Perry Nuclear Plant, DA No. 2014-00108

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Wetland 1	41.8016	-81.1369	PEM/PSS	0.544 acre	Section 404 wetland
Wetland 2	41.8016	-81.1369	PFO	2.021 acres	Section 404 wetland
Wetland 3	41.8016	-81.1369	PFO	0.054 acre	Section 404 wetland
Wetland 4	41.8016	-81.1369	PFO	36.195 acres	Section 404 wetland
Wetland 5	41.8016	-81.1369	PEM	2.451 acres	Section 404 wetland
Wetland 6	41.8016	-81.1369	PFO	0.007 acre	Section 404 wetland
Wetland 7	41.8016	-81.1369	PFO	0.008 acre	Section 404 wetland
Wetland 8	41.8016	-81.1369	PFO	0.053 acre	Section 404 wetland
Wetland 9	41.8016	-81.1369	PFO/PEM	2.115 acres	Section 404 wetland
Wetland 10	41.8016	-81.1369	PEM	0.018 acre	Section 404 wetland
Wetland 11	41.8016	-81.1369	PEM	0.047 acre	Section 404 wetland
Wetland 12	41.8016	-81.1369	PEM	0.017 acre	Section 404 wetland
Wetland 13	41.8016	-81.1369	PEM	0.322 acre	Section 404 wetland
Wetland 14	41.8016	-81.1369	PEM	0.140 acre	Section 404 wetland
Wetland 15	41.8016	-81.1369	PFO	0.157 acre	Section 404 wetland
Wetland 16	41.8016	-81.1369	PEM	1.123 acres	Section 404 wetland
Wetland 17	41.8016	-81.1369	PEM	0.043 acre	Section 404 wetland
Wetland 18	41.8016	-81.1369	PFO	0.023 acre	Section 404 wetland
Wetland 19	41.8016	-81.1369	PFO	0.264 acre	Section 404 wetland
Wetland 20	41.8016	-81.1369	PFO	0.031 acre	Section 404 wetland

Wetland 21	41.8016	-81.1369	PFO	0.031 acre	Section 404 wetland
Wetland 22	41.8016	-81.1369	PFO	0.257 acre	Section 404 wetland
Wetland 23	41.8016	-81.1369	PFO	0.013 acre	Section 404 wetland
Wetland 24	41.8016	-81.1369	PFO	0.049 acre	Section 404 wetland
Wetland 25	41.8016	-81.1369	PFO	0.045 acre	Section 404 wetland
Wetland 26	41.8016	-81.1369	PFO	0.082 acre	Section 404 wetland
Stream 1	41.8016	-81.1369	R2	2,131 linear feet	Section 404 stream
Stream 2	41.8016	-81.1369	R6	55 linear feet	Section 404 stream
Stream 3	41.8016	-81.1369	R4	466 linear feet	Section 404 stream
Stream 4	41.8016	-81.1369	R4	3,226 linear feet	Section 404 stream
Stream 5	41.8016	-81.1369	R4	1,022 linear feet	Section 404 stream
Stream 6	41.8016	-81.1369	R2	58 linear feet	Section 404 stream
Stream 7	41.8016	-81.1369	R6	54 linear feet	Section 404 stream
Stream 8	41.8016	-81.1369	R6	30 linear feet	Section 404 stream
Stream 9	41.8016	-81.1369	R6	116 linear feet	Section 404 stream
Stream 10	41.8016	-81.1369	R6	16 linear feet	Section 404 stream
Stream 11	41.8016	-81.1369	R6	177 linear feet	Section 404 stream
Stream 12	41.8016	-81.1369	R6	207 linear feet	Section 404 stream

FirstEnergy Corporation – Perry Nuclear Plant
D/A Processing No. 2014-00108
Lake County, Ohio
Quad: Perry
Sheet 1 of 2

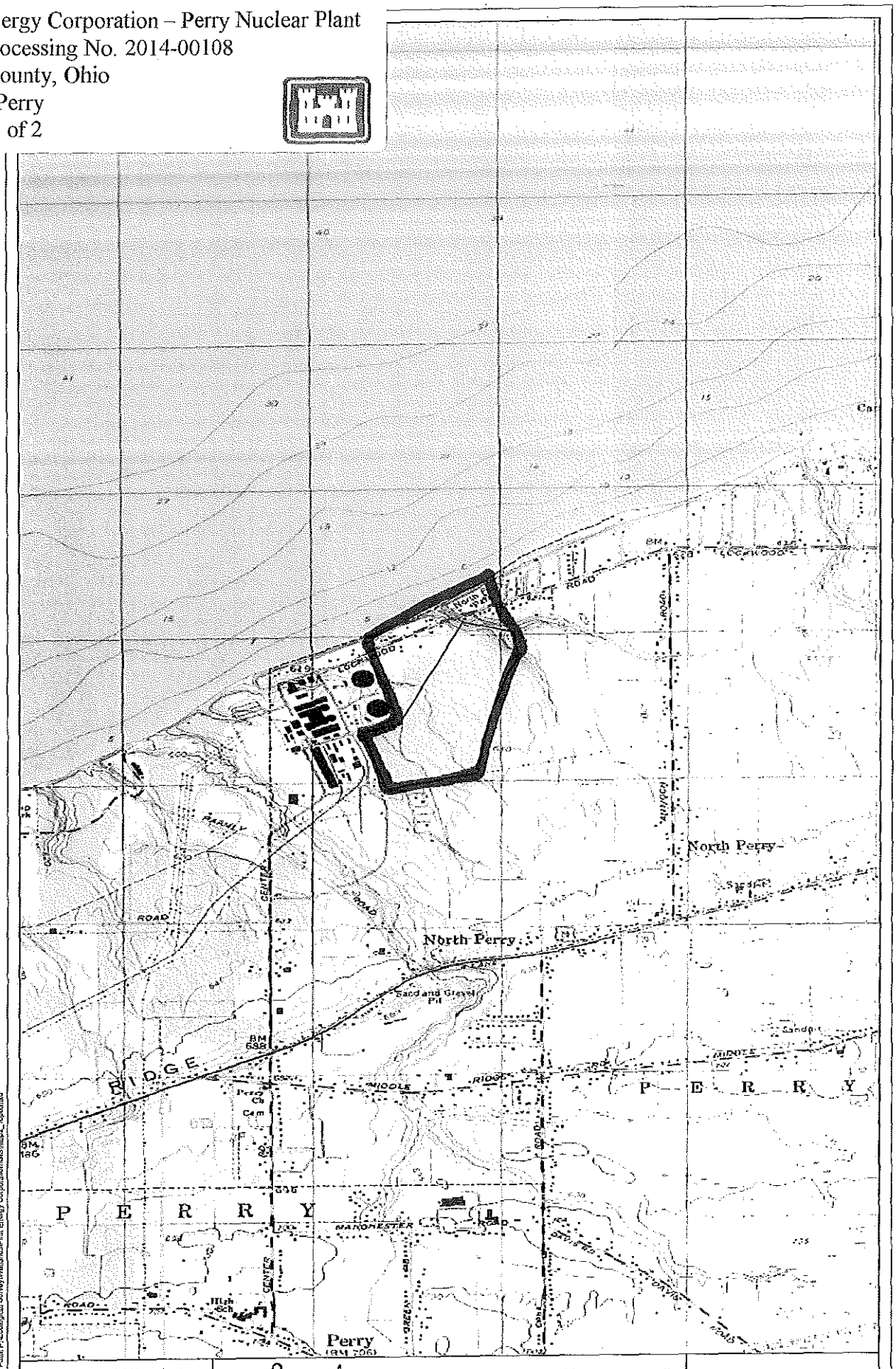

Figure 2. USGS 7.5-minute Topographic Map of Perry Quadrangle. First Energy Coroporation.

Path: P:\Ecological Survey\Wetlands\First Energy Corporation\GIS\Map2_Topo.mxd

Date: 3/25/2014

Basemap courtesy of National Geographic Society (2013).

FirstEnergy Corporation – Perry Nuclear Plant
D/A Processing No. 2014-00108
Lake County, Ohio
Quad: Perry
Sheet 2 of 2

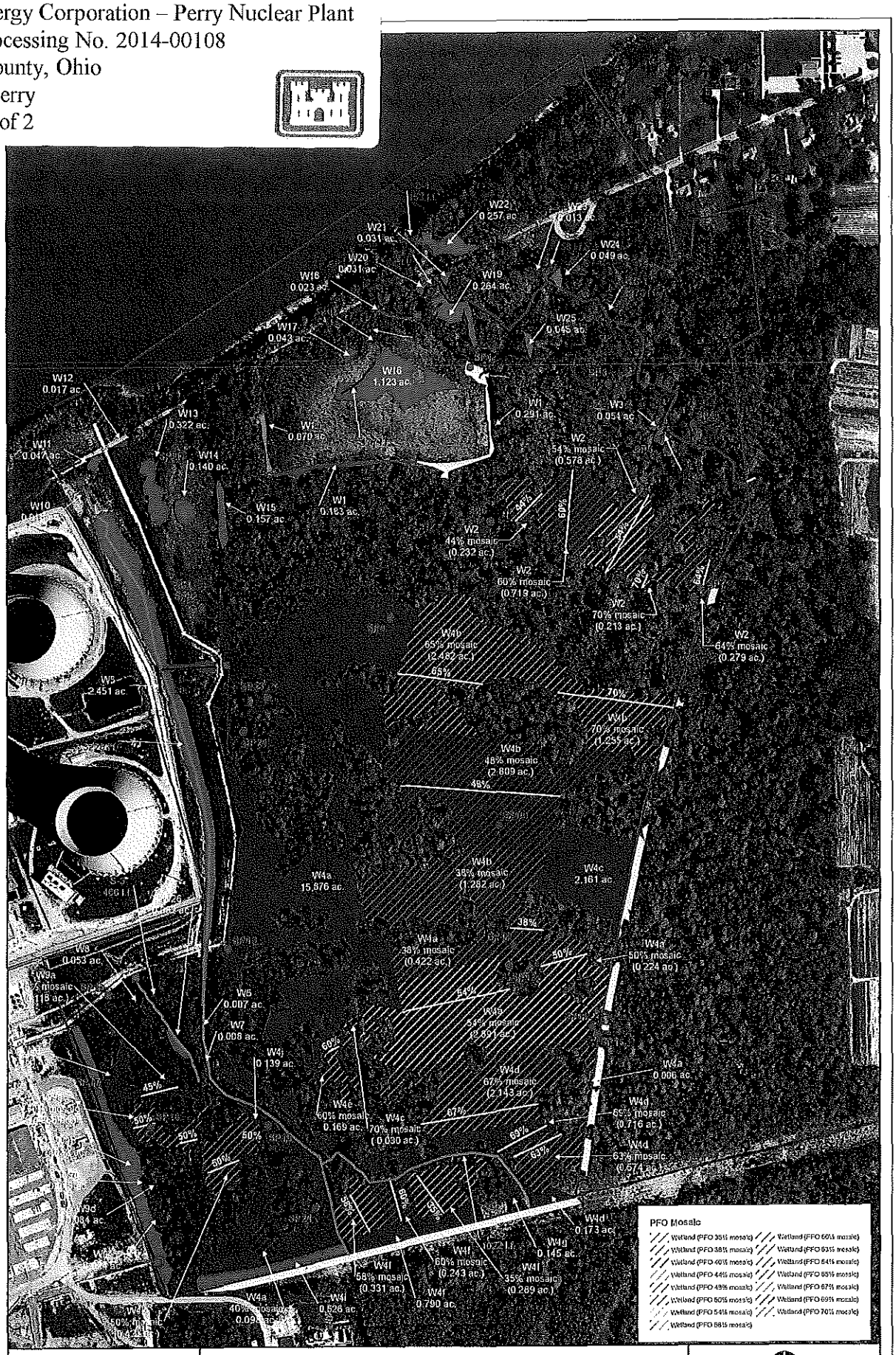

Figure 6. Site Map of Wetlands and Other Water Resources. First Energy Corporation.

Culvert
Sample Location
Transect
Stream (Ephemeral)
Stream (Intermittent)
Stream (Perennial)
Stream (Offsite)
Wetland (PEM)
Wetland (PEMSS)
Wetland (PFO)
Wetland (PSS)
Wetland (Offsite)
Study Area
ProjectArea

300 150 0 300 Feet
60 30 0 60 Meters

EnviroScience
Excellence in Any Environment

Path: P:\Ecological Survey\Wetlands\First Energy Corporation\Perry Nuclear Power Plant\GIS\Maps_Site_Transects_REV.mxd
Date: 8/8/2014

Basemap courtesy of OSIP (2011).

Public Notice

U.S. Army Corps of Engineers
Buffalo District
CELRB-TD-R

Applicant: FirstEnergy Nuclear Operating Company

Published: December 23, 2014
Expires: January 21, 2015

Application No: 2014-00108
Section: OH

All written comments should reference the above Application No. and be addressed to:
US Army Corps of Engineers, Buffalo District
Regulatory Branch (Attn:) Peter Krakowiak
1776 Niagara Street
Buffalo, NY 14207

THE PURPOSE OF THIS PUBLIC NOTICE IS TO SOLICIT COMMENTS FROM THE PUBLIC REGARDING THE WORK DESCRIBED BELOW. NO DECISION HAS BEEN MADE AS TO WHETHER OR NOT A PERMIT WILL BE ISSUED AT THIS TIME.

Application for Permit under Authority of Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (33 U.S.C. 1344).

APPLICANT: FirstEnergy Nuclear Operating Company

WATERWAY & LOCATION: Numerous wetlands and streams located on a 125-acre property located east of the existing Perry Nuclear Plan at 10 Center Road, Village of North Perry, Lake County, Ohio

LATITUDE & LONGITUDE: Latitude North: 41.800981
Longitude West: -81.135455

EXISTING CONDITIONS: The project site consists of primarily high quality wetland and forested vegetative communities with several streams flowing through the area. The area along the existing nuclear plant consists of an incised, straightened stream with an emergent buffer. Description of delineation of waters of the US, if applicable: Nine wetlands and five streams were identified within the project area (see PJD dated September 12, 2014. Note: PJD encompasses a larger area and depicts more aquatic resources). The shoreline of Lake Erie at the project location is a very steep bluff and is currently eroding.

PROPOSED WORK: The proposed project includes the discharge of fill into federally jurisdictional wetlands and streams in association with a stream relocation project. As a result of Nuclear Regulatory Commission (NRC) requirements, the applicant was required to re-evaluate flood and seismic hazards at their facility. The re-evaluation resulted in the need to relocate and expand the capacity of an existing stream that currently flows along the east boundary of the facility. The proposed relocation (referred to as Modified Option 1.8) will result in permanent impacts to 4.944 acres of federal wetlands (1.488 acres of PEM and 3.456 acres of PFO) and 3,242 linear feet of stream (206 linear feet of ephemeral and 3,036 linear feet of intermittent). The permanent wetland impacts include estimated indirect impacts (calculated by adding a 20-65 foot area along impacted wetland areas) that may occur as a result of dewatering adjacent wetland areas. The relocated stream will outlet at Lake Erie, well above the Ordinary High Water Mark. The shoreline in this area is proposed to be graded back with a gentler slope and stabilized.

PROJECT PURPOSE
Basic: Flood Risk Abatement
Overall: Containment of floodwaters during a Probable Maximum Flood event pursuant to federal requirements

Water Dependency Determination *(describe only if project affecting Special Aquatic Site)*: The proposed project is not a water dependent activity.

AVOIDANCE AND MINIMIZATION INFORMATION: Several alternatives were evaluated to help avoid and minimize wetland and stream impacts, including various stream relocation alignments, changes to the existing facility, use of pipe/culverts bored to Lake Erie, use of upstream water detention methods, and taking no action. The no action alternative would not fulfill the project purpose. Changes to the existing facility would negatively impact operation and security, and is contrary to the plant's design and license. Boring a pipe or pipes to Lake Erie is not a viable option due to the potential for blockage by debris during storm events. Use of upstream detention basins was evaluated and determined to not be viable. The basins would need to be placed far upstream to avoid high quality wetlands which would result in a relatively large watershed still contributing to the existing stream. The diversion of water to the Major Stream located to the west was evaluated and determined not to be viable due to elevation differences, impacts to existing wetlands, and potential back-up issues.

Four viable options were considered. These included diverting water to an east stream, modifying the existing stream in-place, and re-routing the stream to the north/east (2 configurations – Option 1.8 and Modified Option 1.8). The diversion of the existing stream to connect with the east stream would result in a larger amount of high quality wetland impacts, bi-sect wetland areas, and possibly impact the lower reaches of the east stream due to higher flows. The modification of the existing stream would result in a larger amount of wetland impacts. The re-route of the existing stream to the north/east using the preferred route (Option 1.8) would result in greater wetland impacts and slightly less stream impacts. Modified Option 1.8 is the proposed option.

PROPOSED MITIGATION: The applicant proposes to mitigation for 3,242 linear feet of stream impacts and 4.944 acres of wetland impacts through a combination of on-site preservation, in-lieu fee credits, and mitigation bank credits. The existing stream will be re-routed resulting in 2,780 linear feet of stream, which is proposed as partial stream mitigation. Approximately 2,131 linear feet of stream, 20 acres of upland buffer, and 0.744 acre of wetland will be preserved on-site through a deed restriction. Additionally, the applicant proposes to purchase 5 credits from The Nature Conservancy In-Lieu Fee Program and 7.4 credits from the Pine Brook Wetland Mitigation Bank, a preservation-only mitigation bank.

Location and details of the above described work are shown on the attached maps and drawings.

Comments or questions pertaining to the work described in this notice should be reference the Application Number and be directed to the attention of Peter Krakowiak, who can be contacted at the above address, by calling (716) 879-4363, or by e-mail at: Peter.j.krakowiak@usace.army.mil A lack of response will be interpreted as meaning that there is no objection to the work as proposed.

The applicant has certified that the proposed activity complies with Ohio's approved Coastal Zone Management Program and will be conducted in a manner consistent with that program. Any comments on the consistency of the proposed activity with Ohio's Coastal Zone Management Program should be forwarded to:

Mr. John Kessler
Ohio Department of Natural Resources
Office of Real Estate
2045 Morse Rd.
Columbus, OH 43229-6605
phone: 614-265-6621
email: john.kessler@dnr.state.oh.us

The following authorization is required for this project:

Water Quality Certification (or waiver thereof) from the Ohio Environmental Protection Agency

Based on preliminary findings, there do not appear to be any properties listed in, or eligible for listing in, the National Register of Historic Places within the permit area as shown on Sheet 1 of 5. Therefore, the Corps has determined that the proposed project will have no affect on historic properties. This notice constitutes initiation of consultation with the Ohio Historic Preservation Office (SHPO) per Section 106 of the National Historic Preservation Act. All currently available historic resource information pertaining to this proposed project if any has been provided to the SHPO. Additional information concerning historic properties should be submitted to the Corps before the end of the comment period of this notice. The Corps will forward that information to the SHPO for their review.

Pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the Corps of Engineers is consulting, under separate cover, with the USFWS to evaluate any potential impacts to: Indiana bat (*Myotis sodalis*), Northern Long-eared Bat (*Myotis septentrionalis*), Kirtland's Warbler (*Setophaga kirtlandii*), Piping Plover (*Charadrius melodus*), Snuffbox (*Epioblasma triquetra*), Rufa Red Knot (*Calidris canutus rufa*), and Bald Eagle (*Haliaeetus leucocephalus*), and to ensure that the proposed activity is not likely to jeopardize their continued existence or result in the destruction or adverse modification of critical habitat.

This notice is promulgated in accordance with Title 33, Code of Federal Regulations, parts 320-330. Any interested party desiring to comment on the work described herein may do so by submitting their comments, in writing, so that they are received no later than 4:30 pm on the expiration date of this notice.

Comments submitted in response to this notice will be fully considered during the public interest review for this permit application. All written comments will be made a part of the administrative record which is available to the public under the Freedom of Information Act. The Administrative Record, or portions thereof may also be posted on a Corps of Engineers internet web site. Due to resource limitations, this office will normally not acknowledge the receipt of comments or respond to individual letters of comment.

Any individual may request a public hearing by submitting their written request, stating the specific reasons for holding a hearing, in the same manner and time period as other comments.

Public hearings for the purposes of the Corps permit program will be held when the District Commander determines he can obtain additional information, not available in written comments, that will aid him in the decision making process for this application. A Corps hearing is not a source of information for the general public, nor a forum for the resolution of issues or conflicting points of view (witnesses are not sworn and cross examination is prohibited). Hearings will not be held to obtain information on issues unrelated to the work requiring a permit, such as property ownership, neighbor disputes, or the behavior or actions of the public or applicant on upland property not regulated by the Department of the Army. Information obtained from a public hearing is given no greater weight than that obtained from written comments. Therefore, you should not fail to make timely written comments because a hearing might be held.

The decision to approve or deny this permit request will be based on an evaluation of the probable impact, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among these are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

SIGNED

Diane C. Kozlowski
Chief, Regulatory Branch

NOTICE TO POSTMASTER: It is requested that this notice be posted continuously and conspicuously for 30 days from the date of issuance.

FirstEnergy Nuclear Operating Company
D/A Processing No. 2014-00108
Lake County, Ohio
Quad: Perry
Sheet 1 of 12

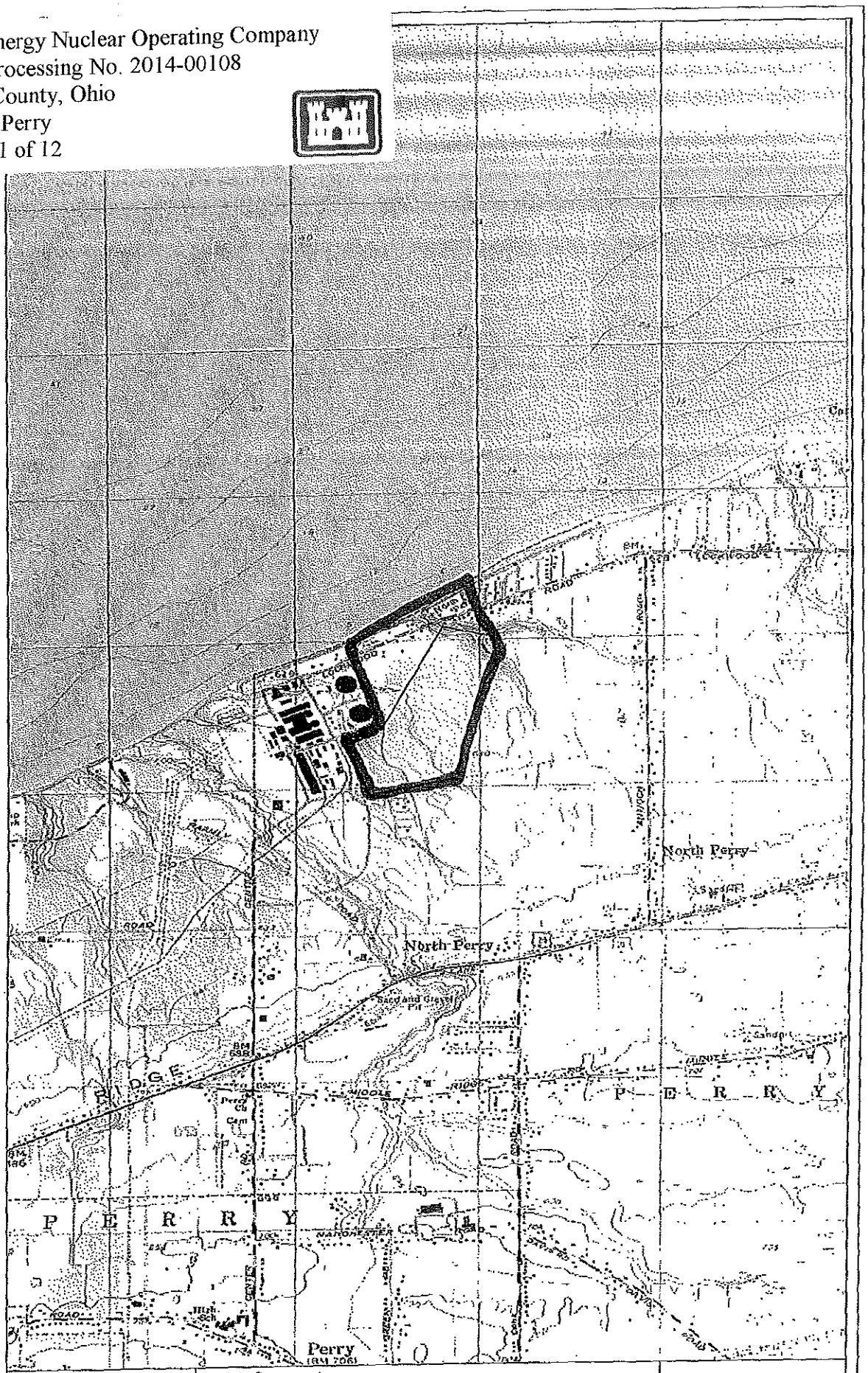

Figure 2. USGS 7.5-minute Topographic Map of Perry Quadrangle. First Energy Corporation.

Basemap courtesy of National Geographic Society (2013).

FirstEnergy Nuclear Operating Company
D/A Processing No. 2014-00108
Lake County, Ohio
Quad: Perry
Sheet 2 of 12

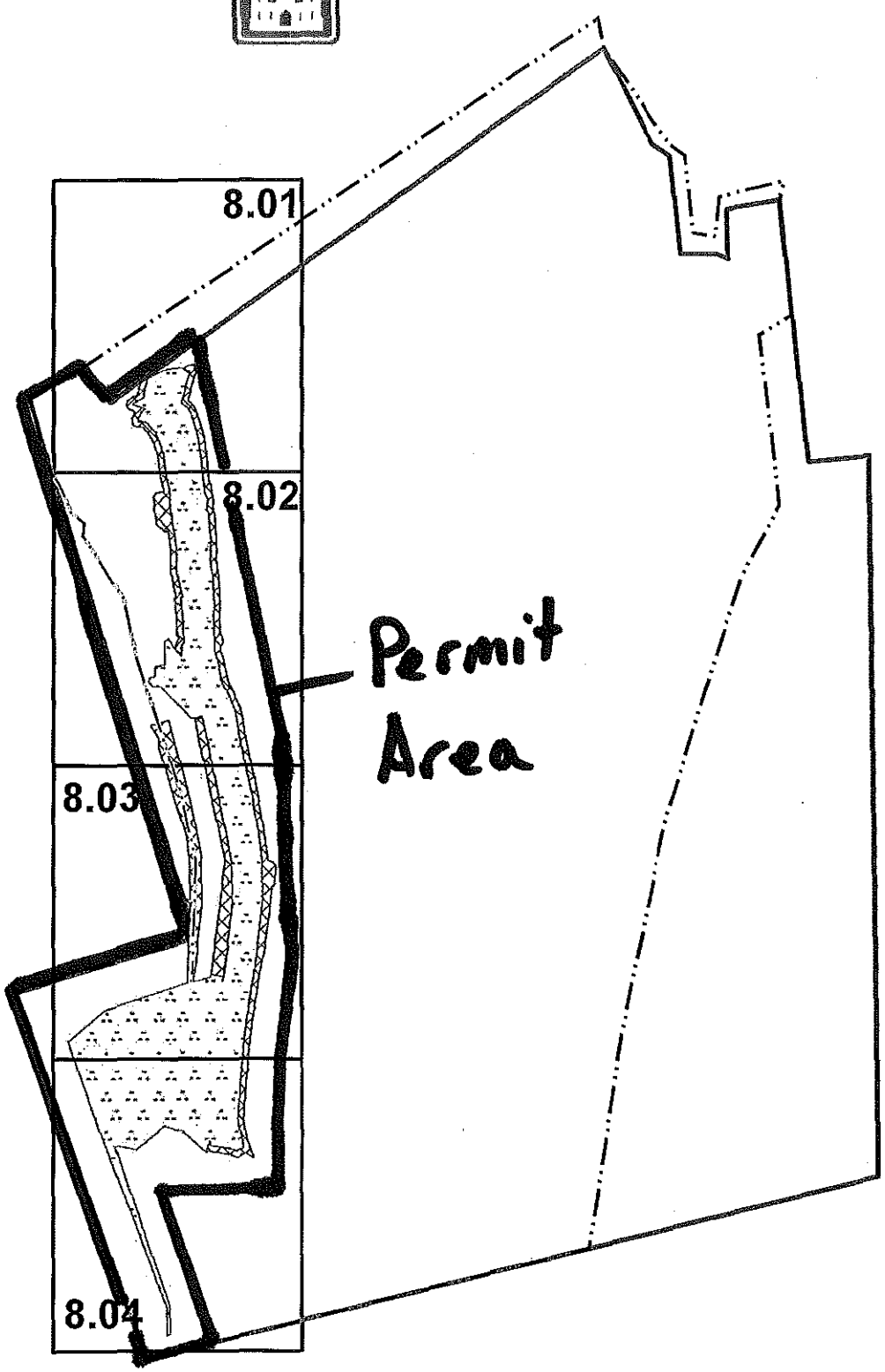

Figure 8. Impacts Map Overview for Option 1.8 Modification. FENOC.

Minor Stream Indirect Impact Area
Indirect Impact Area
Direct Impact Area / Stream Bed
Study Area
Project Area

0 150 300 600 Feet
0 50 100 200 Meters

EnviroScience
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Date: 12/11/2014 Path: P:\Ecological Survey\Wetlands\FirstEnergy Corporation\Perry Nuclear Power Plant\GIS\FinalMapping\Option1.8_MOD_FINAL_REVISED110714_Map_ImpactsOption1_8MOD_FINAL_Overview_BlkWht.mxd

Basemap courtesy of Esri.

FirstEnergy Nuclear Operating Company
D/A Processing No. 2014-00108
Lake County, Ohio
Quad: Perry
Sheet 3 of 12

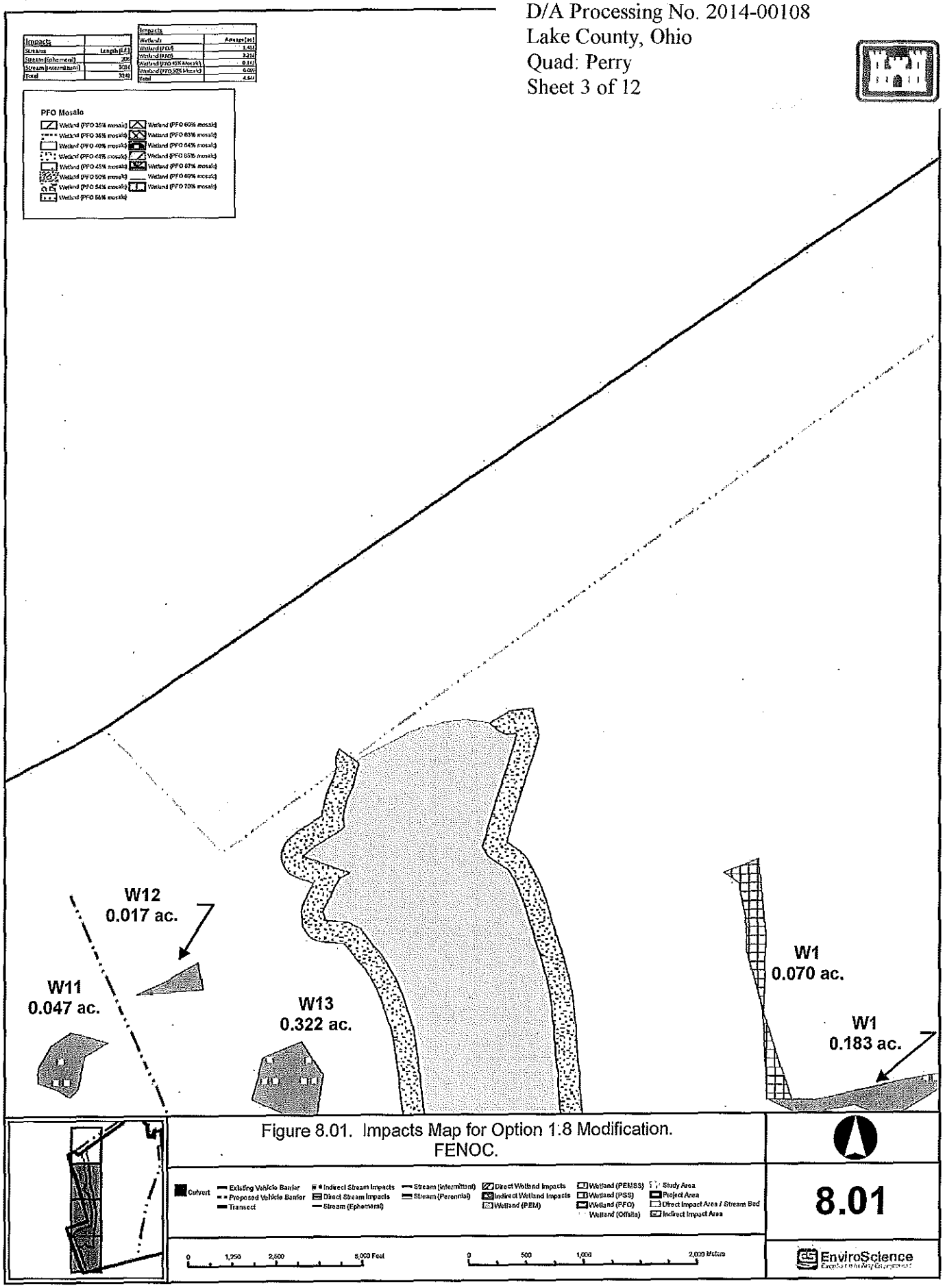

Figure 8.01. Impacts Map for Option 1:8 Modification.
FENOC.

Basemap courtesy of Esri.

Date: 12/11/2014 Path: P:\Ecological Survey\Wetlands\FirstEnergy Corporation\Perry Nuclear Power Plant\GIS\FinalMapping\Option1.8_MOD_FINAL_REVISED110714_Map_ImpactsOption1_8MOD_FINAL_REV3_MB_BLKWHT.mxd

FirstEnergy Nuclear Operating Company
D/A Processing No. 2014-00108
Lake County, Ohio
Quad: Perry
Sheet 4 of 12

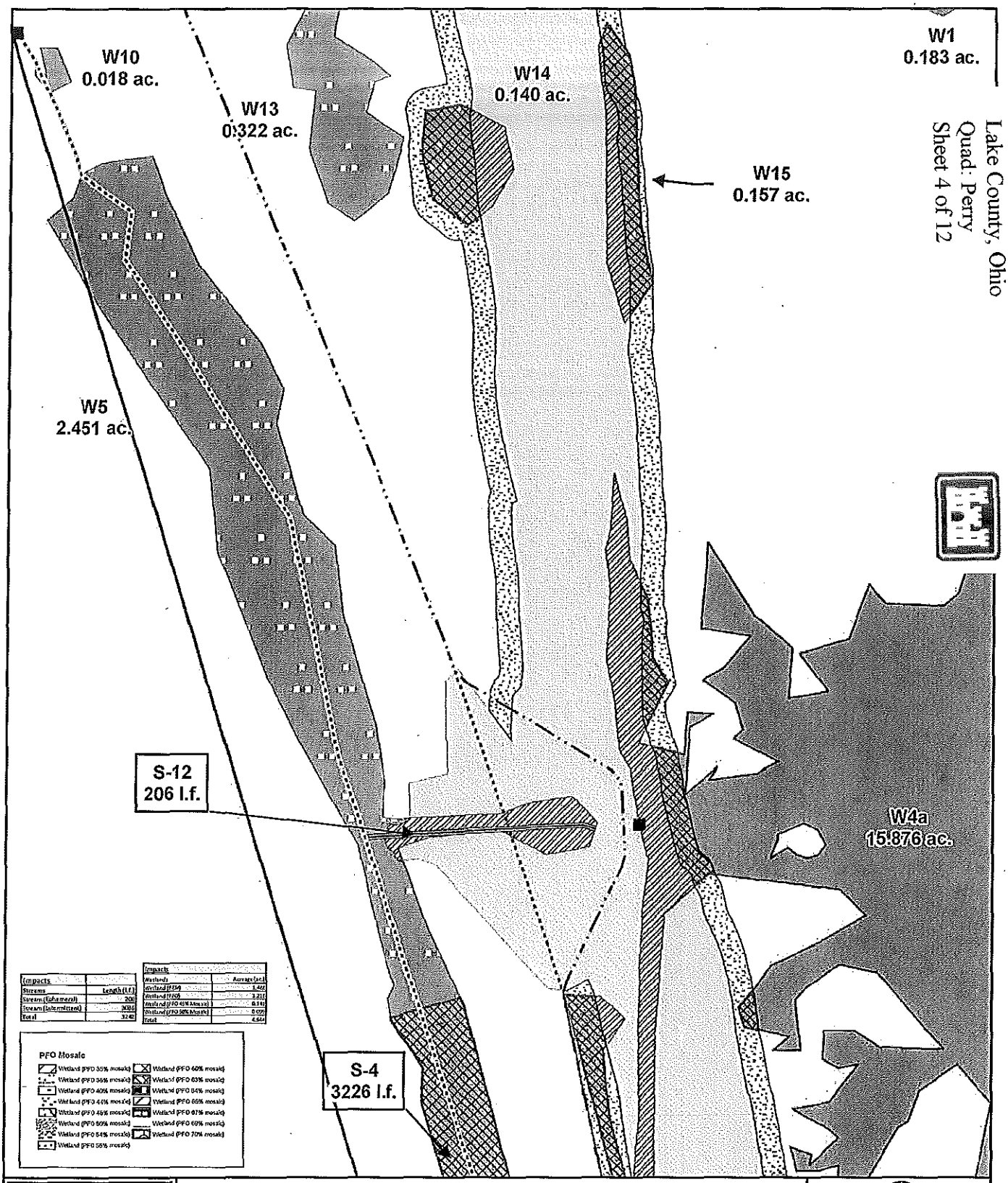

Figure 8.02. Impacts Map for Option 1.8 Modification.
FENOC.

Culvert
Existing Vehicle Barrier
Proposed Vehicle Barrier
Transect
Indirect Stream Impacts
Direct Stream Impacts
Stream (Ephemeral)
Stream (Intermittent)
Stream (Perennial)
Direct Wetland Impacts
Indirect Wetland Impacts
Wetland (PEM)
Wetland (PEMSS)
Wetland (PSS)
Wetland (PFO)
Wetland (Offsite)
Study Area
Project Area
Direct Impact Area / Stream Bed
Indirect Impact Area

0 1,250 2,500 5,000 Feet
0 500 1,000 2,000 Meters

8.02

EnviroScience

Date: 12/11/2014 Path: P:\Ecological Survey\Wetlands\FirstEnergy Corporation\Perry Nuclear Power Plant\GIS\FinalMapping\Option1.8_MOD_FINAL_REVISED110714_Map_ImpactsOption1_8MOD_FINAL_REV3_MB_BLKWHT.mxd

Basemap courtesy of Esri.

Impacts	
Stream	Length (l.f.)
Stream (Ephemeral)	205
Stream (Intermittent)	3036
Total	3242

Impacts	
Wetlands	Acreage (ac.)
Wetland (PEM)	1.442
Wetland (PFO)	3.231
Wetland (PFO 85% Mosaic)	0.141
Wetland (PFO 50% Mosaic)	0.159
Total	4.973

PFO Mosaic

- Wetland (PFO 55% mosaic)
- Wetland (PFO 60% mosaic)
- Wetland (PFO 35% mosaic)
- Wetland (PFO 60% mosaic)
- Wetland (PFO 40% mosaic)
- Wetland (PFO 64% mosaic)
- Wetland (PFO 44% mosaic)
- Wetland (PFO 65% mosaic)
- Wetland (PFO 46% mosaic)
- Wetland (PFO 67% mosaic)
- Wetland (PFO 60% mosaic)
- Wetland (PFO 69% mosaic)
- Wetland (PFO 64% mosaic)
- Wetland (PFO 70% mosaic)
- Wetland (PFO 55% mosaic)

W5
2.451 ac.

S-3
466 l.f.

W4a
15.876 ac.

W4a
15.876 ac.

W8
0.053 ac.

W6
0.007 ac.

FirstEnergy Nuclear Operating Company
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Lake County, Ohio
Quad: Perry
Sheet 5 of 12

REV3_MB_BLKWHT.mxd

Date: 12/11/2014 Path: P:\Ecological Survey\Wetlands\FirstEnergy Corporation\Perry Nuclear Power Plant\GIS\

Figure 8.03. Impacts Map for Option 1.8 Modification.
FENOC.

Culvert
Existing Vehicle Barrier
Proposed Vehicle Barrier
Transect
Indirect Stream Impacts
Direct Stream Impacts
Stream (Ephemeral)
Stream (Intermittent)
Stream (Perennial)
Direct Wetland Impacts
Indirect Wetland Impacts
Wetland (PEM)
Wetland (PEM/SS)
Wetland (PSS)
Wetland (PFO)
Wetland (Offsite)
Study Area
Project Area
Direct Impact Area / Stream Bed
Indirect Impact Area

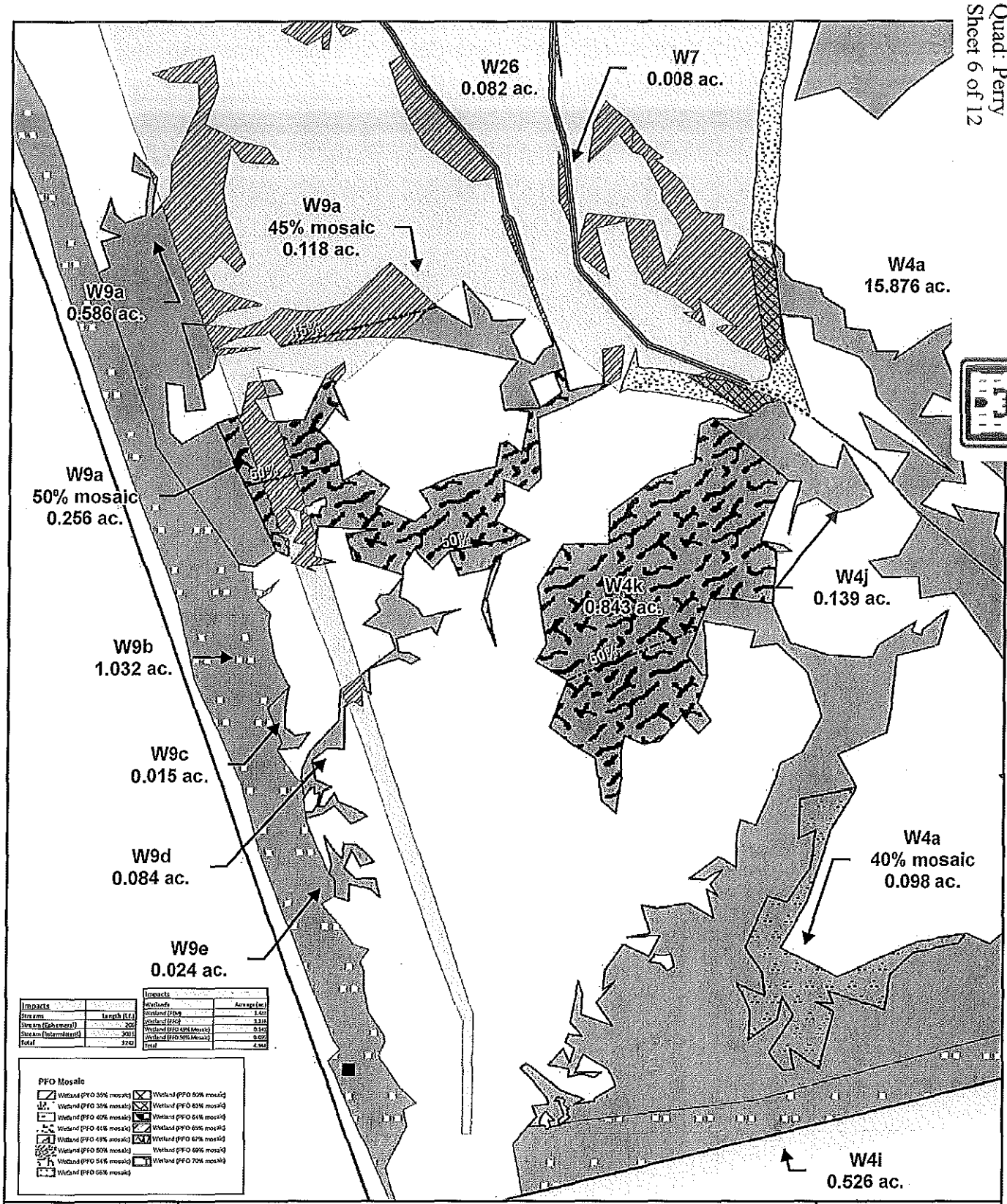
0 1,250 2,500 5,000 Feet
0 500 1,000 2,000 Meters

8.03

EnviroScience

Basemap courtesy of Esri.

FirstEnergy Nuclear Operating Company
D/A Processing No. 2014-00108
Lake County, Ohio
Quad: Perry
Sheet 6 of 12



Impacts	
Streams	Length (Lf.)
Stream (Ephemeral)	206
Stream (Intermittent)	3035
Total	3242

Impacts	
Wetlands	Acreage (ac)
Wetland (PEM)	1.4[illegible]
Wetland (PFO)	1.31[illegible]
Wetland (PFO 45% Mosaic)	0.14[illegible]
Wetland (PFO 50% Mosaic)	0.0[illegible]
Total	4.94[illegible]

Figure 8.04. Impacts Map for Option 1.8 Modification.
FENOC.

Culvert
Existing Vehicle Barrier
Proposed Vehicle Barrier
Transect
Indirect Stream Impacts
Direct Stream Impacts
Stream (Ephemeral)
Stream (Intermittent)
Stream (Perennial)
Direct Wetland Impacts
Indirect Wetland Impacts
Wetland (PEM)
Wetland (PEMSS)
Wetland (PSS)
Wetland (PFO)
Wetland (Offsite)
Study Area
Project Area
Direct Impact Area / Stream Bed
Indirect Impact Area

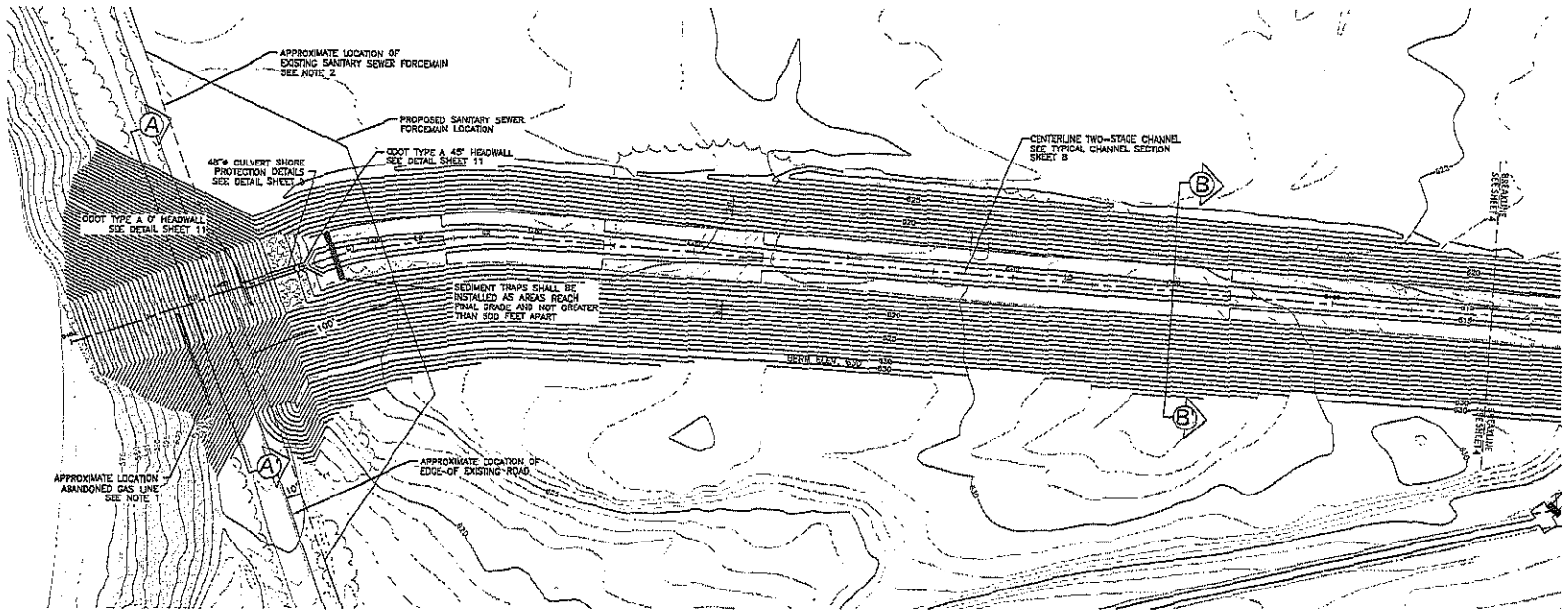
0 1,250 2,500 5,000 Feet
0 500 1,000 2,000 Meters

8.04

EnviroScience

Date: 12/11/2014 Path: P:\Ecological Survey\Wetlands\FirstEnergy Corporation\Perry Nuclear Power Plant\GIS\FinalMapping\Option1.8_MOD_FINAL_REV\SED110714_Map_ImpactsOption1_8MOD_FINAL_REV3_MB_BLKWHT.mxd

Basemap courtesy of Esri.



GRAPHIC SCALE

LEGEND

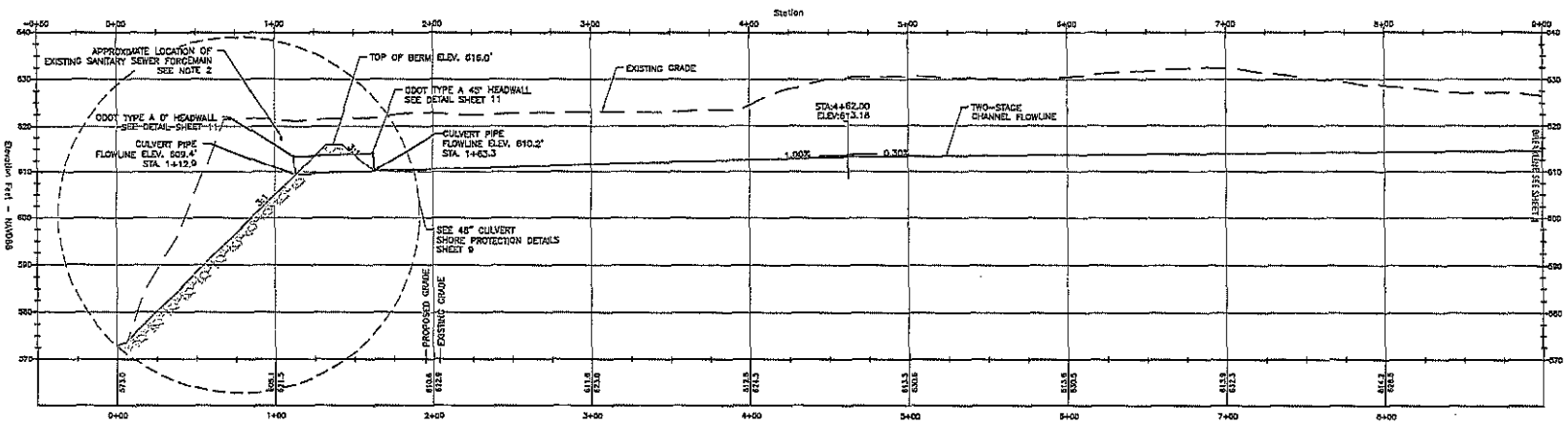
- EXISTING TREELINE
- EXISTING CONTOUR
- EXISTING WATERCOURSE
- 620 PROPOSED CONTOUR
- LEFT TOE OF TWO-STAGE CHANNEL
- RIGHT TOE OF TWO-STAGE CHANNEL

NOTES

1. ABANDONED GAS LINE TO BE REMOVED WITHIN THE EXTENTS OF LIMITS OF DISTURBANCE.
2. APPROXIMATE LOCATION OF EXISTING SANITARY SEWER FORCEMAIN TO BE RELOCATED AS INDICATED PER SEPARATE PLANS. CONTRACTOR SHALL COORDINATE WITH LAKE COUNTY UTILITIES FOR PLAN RELOCATION APPROVAL PRIOR TO GRADING IN THIS AREA.
3. CULVERT AND HEADWALLS TO BE ALIGNED WITH THE TWO-STAGE LOW FLOW CHANNEL.

GRAPHIC SCALE- HORIZONTAL

GRAPHIC SCALE- VERTICAL



FOR PERMITTING ONLY

NEW DRAWING

PERRY NUCLEAR POWER PLANT
10 CENTER RD., PERRY, OHIO 44081

STREAM INSTALLATION PROJECT
PLAN AND PROFILE

REV	MADE	CHKD	APPV'D	DATE
0				

SIZE D 744-0177-00003 REV 0

DUN 13-0802-001-003

FirstEnergy Nuclear Operating Company
D/A Processing No. 2014-00108
Lake County, Ohio
Quad: Perry
Sheet 7 of 12

Table 1. Wetland Impacts for Modified Option 1.8

Wetland		Cowardin Classification	ORAM Score	ORAM Category	Size within Project Area (acres)	Wetland Impact (acres)*	Amount of Discharge# (cubic yards)
W-1		PEM/PSS	34	2	0.291	0	0
		PEM			0.183	0	0
		PSS			0.070	0	0
W-1 Total					**0.544**	**0**	**0**
W-2 Total		PFO mosaic	73.5	3	**2.021**	**0**	**0**
W-3 Total		PEM	50.5	2	**0.054**	**0**	**0**
W-4	a	PFO/PFO mosaic	73.5	3	19.517	2.923	14,147.3
	b	PFO mosaic			7.828	0	0
	c	PFO/PFO mosaic			2.191	0	0
	d	PFO/PFO mosaic			3.606	0	0
	e	PFO mosaic			0.169	0	0
	f	PFO mosaic			1.653	0	0
	g	PFO			0.145	0	0
	h	-			-	0	0
	i	PEM			0.526	0	0
	j	PFO			0.139	0.029	140.4
	k	PFO mosaic			0.421	0	0
W-4 Total					**36.195**	**2.952**	**14,287.7**
W-5 Total		PEM	29	1	**2.451**	**1.095**	**5,299.8**
W-6 Total		PEM	29	1	**0.007**	**0.007**	**33.9**
W-7 Total		PEM	29	1	**0.008**	**0.008**	**38.7**
W-8 Total		PFO	36	Mod 2	**0.053**	**0.053**	**256.5**
W-9	a	PFO	36	Mod 2	0.586	0.445	2,153.8
	a	PFO mosaic	36		0.374		
	b	PEM			1.032	0	0
	c	PFO			0.015	0	0
	d	PFO			0.084	0.007	33.9
	e	PFO			0.024	0	0
W-9 Total					**2.115**	**0.452**	**2,187.7**

Wetland	Cowardin Classification	ORAM Score	ORAM Category	Size within Project Area (acres)	Wetland Impact (acres)*	Amount of Discharge# (cubic yards)
W-10 Total	PEM	29	1	**0.018**	**0**	**0**
W-11 Total	PEM	29	1	**0.047**	**0**	**0**
W-12 Total	PEM	29	1	**0.017**	**0**	**0**
W-13 Total	PEM	27	1	**0.322**	**0**	**0**
W-14 Total	PEM	27	1	**0.140**	**0.140**	**677.6**
W-15 Total	PEM	27	1	**0.157**	**0.157**	**759.9**
W-16 Total	PEM	27	1	**1.123**	**0**	**0**
W-17 Total	PEM	27	1	**0.043**	**0**	**0**
W-18 Total	PEM	27	1	**0.023**	**0**	**0**
W-19 Total	PEM	50.5	2	**0.264**	**0**	**0**
W-20 Total	PEM	50.5	2	**0.031**	**0**	**0**
W-21 Total	PEM	50.5	2	**0.031**	**0**	**0**
W-22 Total	PEM	50.5	2	**0.257**	**0**	**0**
W-23 Total	PFO	50.5	2	**0.013**	**0**	**0**
W-24 Total	PEM	50.5	2	**0.049**	**0**	**0**
W-25 Total	PEM	50.5	2	**0.045**	**0**	**0**
W-26 Total	PEM	38	2	**0.082**	**0.082**	**396.9**
Total PEM Wetlands				**6.910**	**1.488**	**7,202.0**
Total PEM/PSS Wetlands				**0.291**	**0**	**0**
Total PSS Wetlands				**0.070**	**0**	**0**
Total PFO/PFO mosaic Wetlands				**38.839**	**3.456**	**16,731.9**
Total Wetland				**46.110**	**4.944^**	**23,933.9**

*accounts for both direct and indirect impacts
^due to rounding error, total Wetland Impact sums to 4.946 acres but is actually 4.944 acres
total cubic yards greater when added than multiplied due to rounding

Table 2. Stream Impacts for Modified Option 1.8

Stream	Type	Bankfull Width (feet)	Water Depth at Time of Survey (inch)	Length Within Project Area (linear feet)	Area Within Project Area (acres)	Stream Impacts-Length of Proposed Impacts (linear feet)	Stream Impacts-Width of Proposed Impacts (feet)	Stream Impacts-Area of Proposed Impacts* (acres)	Amount of Discharge (cubic yards)
S-1	perennial	7	6	2,131	0.342	0	0	0	0
S-2	ephemeral	0.4	0.5	55	0.001	0	0	0	0
S-3	intermittent	4.5	3	466	0.048	466	4.5	0.048	233.0
S-4	intermittent	4.3	5	3,226	0.318	2,571	4.3	0.254	1,428.3
S-5	intermittent	3.5	3.5	1,022	0.035	0	0	0	0
S-6	perennial	4	4	58	0.005	0	0	0	0
S-7	ephemeral	1	0	54	0.001	0	0	0	0
S-8	ephemeral	0.5	0	30	0.001	0	0	0	0
S-9	ephemeral	1	1	116	0.003	0	0	0	0
S-10	ephemeral	1.5	0	16	0.001	0	0	0	0
S-11	ephemeral	0.5	1	177	0.002	0	0	0	0
S-12	ephemeral	1.5	4	206	0.007	206	1.5	0.007	34.3
Total Ephemeral Stream				**653**	**0.016**	**206**	**-**	**0.007**	**34.3**
Total Intermittent Stream				**4,714**	**0.401**	**3,036**	**-**	**0.302**	**1,661.3**
Total Perennial				**2,189**	**0.347**	**0**	**-**	**0**	**0**
Total Stream				**7,556**	**0.764**	**3,242**	**-**	**0.309**	**1,695.6**

*accounts for both direct and indirect impacts
^ due to rounding error, total intermittent stream impacts is 2,090 linear feet instead of 2,091 linear feet

FirstEnergy Nuclear Operating Company
D/A Processing No. 2014-00108
Lake County, Ohio
Quad: Perry
Sheet 11 of 12

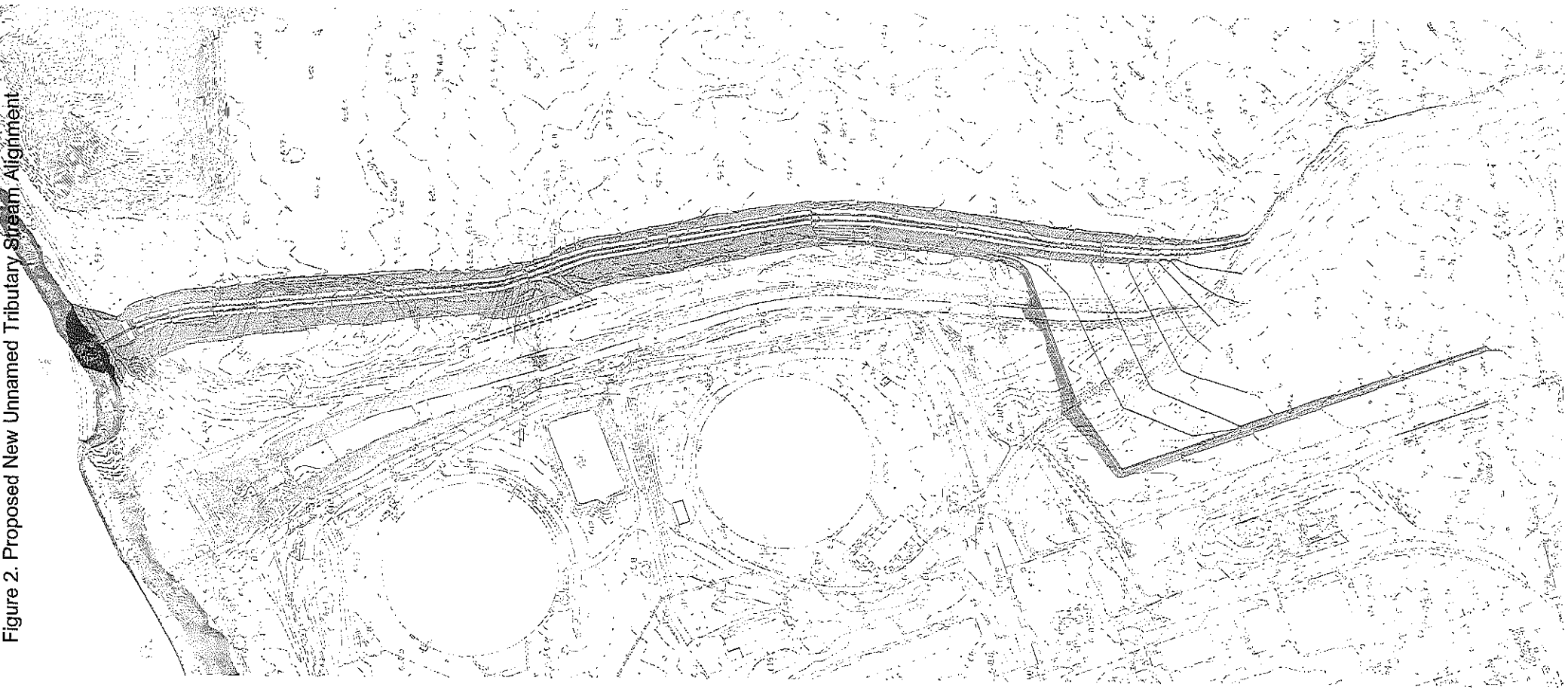
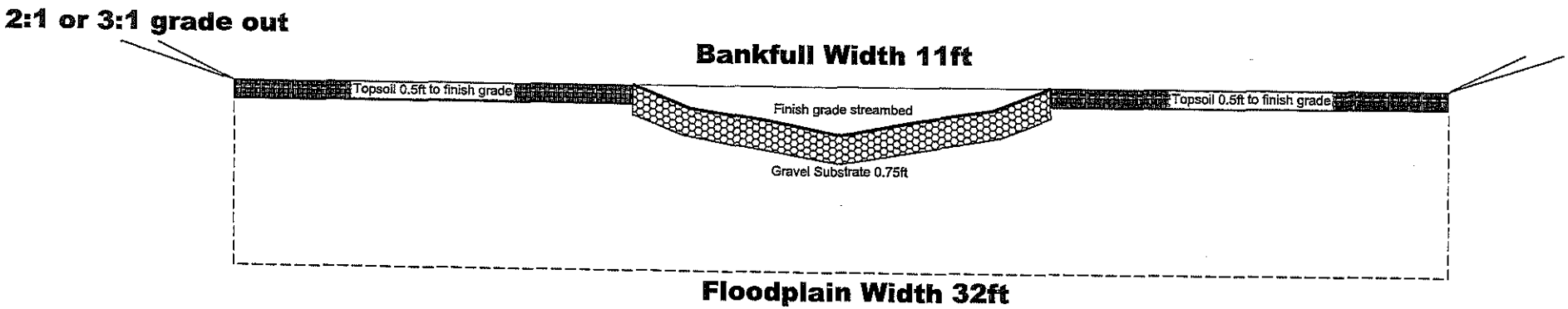


Figure 2. Proposed New Unnamed Tributary Stream Alignment

Figure 3. Typical Cross Section

Proposed Typical Cross section



Conceptual Minor Creek

width=11.0
area=8.33
mean depth= 0.75
w/d=14.66
max depth 1.3

February 3, 2014

Biodiversity Database Program
Division of Wildlife
Ohio Department of Natural Resources
2045 Morse Road, Building G-3
Columbus, OH 43229-6693

Re: *Data Request*
Perry Nuclear Plant Property
Lake County, Ohio

To Whom it May Concern:

Please find attached information regarding the Perry Nuclear Plant Property. Please perform a records search and respond with any information regarding ecological important species or habitat associated with the property or within the adjacent properties. The information will be used to complete the ORAM evaluation for wetlands within the project area located in the City of Perry, Lake County, Ohio.

If you have any questions I can be reached at (330) 688-0111 or email EKennedy@EnviroScienceInc.com.

Respectfully,

Emmalisa Kennedy
Wetland Ecologist

Attachment

EnviroScience
5070 Stow Road
Stow, OH 44224
Toll Free: 800-940-4025 | Office: 330-688-0111 | Fax: 330-688-3858

DATA REQUEST FORM

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
OHIO NATURAL HERITAGE PROGRAM
2045 MORSE RD., BLDG. G-3
COLUMBUS, OHIO 43229-6693
PHONE: 614-265-6452; EMAIL: obdrequest@dnr.state.oh.us

INSTRUCTIONS:
Please complete both pages of this form, sign and return it to the address or email address above along with: **(1)** a brief letter describing your project, and **(2)** a map detailing the boundaries of your project site. A copy of the pertinent portion of a USGS 7.5 minute topographic map is preferred but other maps are acceptable. Data requests will be competed within approximately 30 days. If you email your request you do not need to mail the original unless otherwise requested.

FEES:
As of June 2010, we have temporarily suspended charging a fee until a review of the data request process has been completed.

WHAT WE PROVIDE: The Natural Heritage Database is the most comprehensive source of information on the location of Ohio's rare species and significant natural features. Records for the following will be provided: plants and animals (state and federal listed species), high quality plant communities, geologic features, breeding animal concentrations and unprotected significant natural areas. We also provide locations for managed areas including federal, state, county, local and non-profit sites, as well as state and national scenic rivers. A minimum one mile radius around the project site will automatically be searched. Because the data is sensitive information, it is our policy to provide only the data needed to complete your project.

****

Date: 02/03/2014 Company name: EnviroScience, Inc.

Name of person response letter should be addressed to: Mr. ☐ Ms. ☒
Emmalisa Kennedy

Address: 5070 Stow Road

City/State/Zip: Stow, Ohio 44224

Phone: 330-688-0111 Fax: 330-688-3858

E-mail address: EKennedy@EnviroScienceInc.com

Project Name: Perry Nuclear Plant Property

Project Number: 2704

Project Site Address: Northeast of Center Road in North Perry, Lake County, Ohio

Project County: Lake

Project City/Township: City of North Perry, Perry Township

Project site is located on the following USGS 7.5 minute topographic quad(s): Perry

Project Latitude and Longitude if available (decimal degrees is preferred): 41.800742, -81.135022

Description of work to be performed at the project site: A wetlands determination will be performed at the site. This information will be used for completion of the ORAM.

How do you want your data reported? (Both formats provide exactly the same data. The only difference is in the format of our response. The manual search is most appropriate for small scale projects or for those who do not have GIS capabilities. Please choose only one option.)

Printed list and map (manual search) X **OR** GIS shapefile (computer search) _____

Additional information you require:
1. Indiana bat records within 5 miles
2. Indiana bat hibernacula within 10 miles
3. date of each record

How will the information be used? ORAM evaluation

I certify that data supplied by the Ohio Natural Heritage Program will not be published without crediting the ODNR Division of Wildlife as the source of the material. In addition, I certify that electronic datasets will not be distributed to others without the consent of the Division of Wildlife, Ohio Natural Heritage Program.

Signature _____

Date: 02/03/14

DNR 5203
REV 8/2010

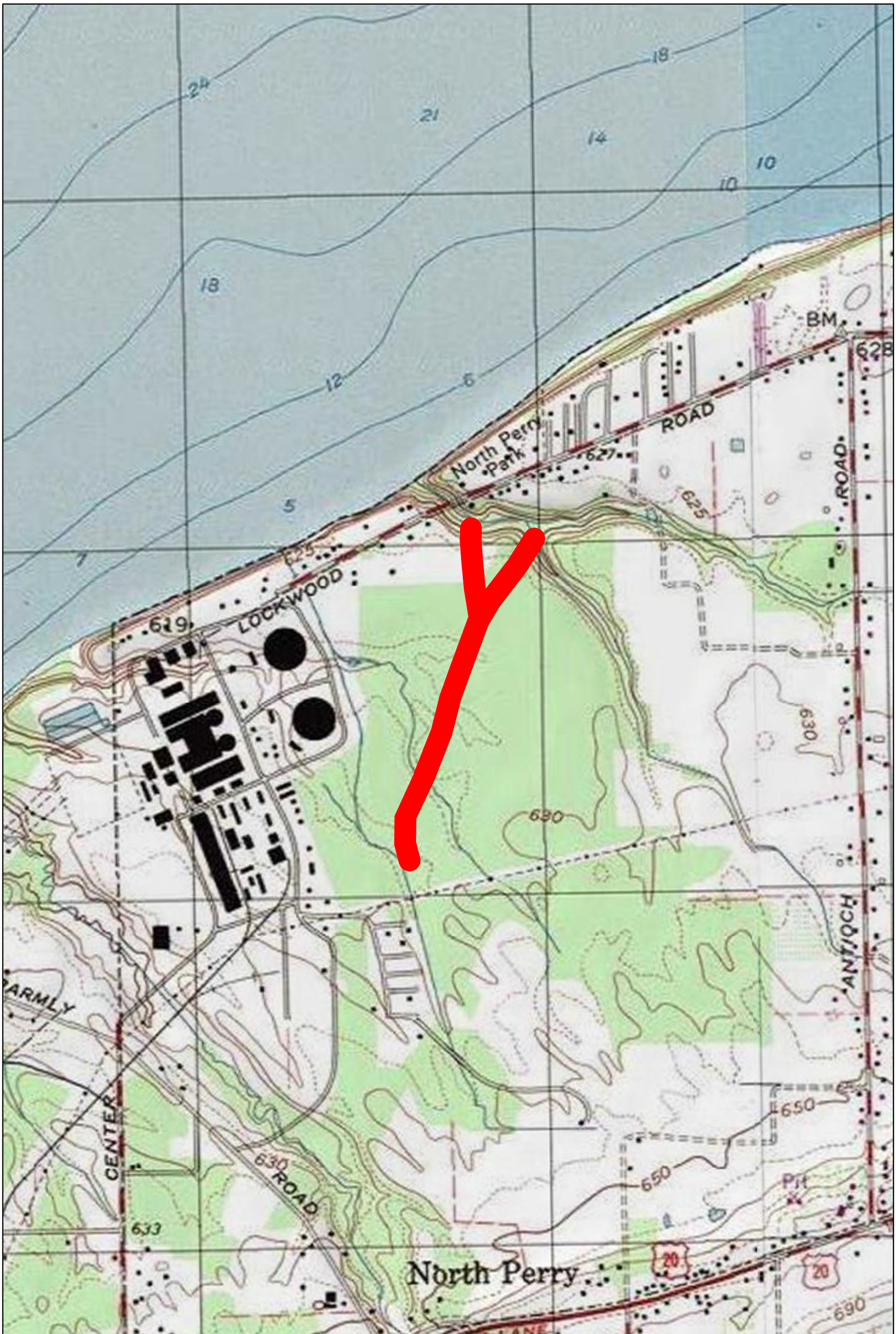


Figure 2. USGS 7.5-minute Topographic Map of Perry Quadrangle. First Energy Coroporation.

Project Area

1,000 500 0 1,000 Feet

300 150 0 300 Meters

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Date: 1/30/2014 Path: P:\Ecological Survey\Wetlands\First Energy Corporation\GIS\Map2_Topo.mxd

Basemap courtesy of National Geographic Society (2013).

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

February 10, 2014

Emmalisa Kennedy
EnviroScience, Inc.
5070 Stow Road
Stow, OH 44224

Dear Ms. Kennedy

After reviewing the Natural Heritage Database, I find the Division of Wildlife has two records in the Perry Nuclear Plant Property project area in the City of North Perry, Lake County, Ohio. The state threatened spotted turtle (*Clemmys guttata*) was reported from swampy areas in the 1986 Annual Report of the Perry Plant Ecological Monitoring Program. The site was described as a notable Mixed Mesophytic Forest by the Division of Natural Areas & Preserves in 1981. We have no records for Indiana Bat (*Myotis sodalis*) capture locations within a five mile radius or hibernacula within a ten mile radius of the project site.

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

Greg Schneider, Administrator
Ohio Natural Heritage Database Program

GREGORY LIPPS, LLC
1473 County Road 5-2 | Delta, Ohio |43515 | Phone: 419.376.3441 | GregLipps@gmail.com | GregLipps.com

August 25, 2014

Bill Beach
Environmental Department
First Energy Corp
76 S Main St.
Akron, OH 44308

Re: Results of Spotted Turtle surveys at the Perry Nuclear Power Plant, Lake County, Ohio

Dear Mr. Beach:

This letter provides the results of a survey for the Spotted at a project site located on the property of First Energy's Perry Nuclear Power Plant (PNPP) in Lake County, Perry Township, Ohio (Figs. 1 and 2). The survey was requested by the Ohio Division of Wildlife in response to a proposed project to develop additional drainage to the east of the PNPP facilities.

The Spotted Turtle is a small freshwater turtle that inhabits shallow-water wetlands of the east coast and the Great Lakes Region. These wetlands may include bogs, fens, wet prairies, vernal pools, the margins of ponds and lakes, or even roadside ditches. Individuals often use multiple small seasonal wetlands and may spend as much as 74% of their time in upland areas. Seasonal activity is greatest in May and April, although individuals may occasionally be active as early as January, if conditions permit. Nesting activity peaks in early June and is usually followed by a period of summer dormancy (estivation). During this time, Spotted Turtles usually create and crawl into “forms,” depressions in heavy organic soils, leaf litter, stump holes or other such areas where they remain mostly inactive.

The Spotted Turtle is listed as a threatened species by the Ohio Division of Wildlife. A previous investigation of Spotted Turtles at PNPP from 1981 to 1986 reported 154 captures of 66 individual turtles, with an estimated population of 148 individuals in 1986[1]. At the time, this was believed to be the largest population of Spotted Turtles in the state.

A map showing the general location of the “Spotted Turtle Study Area” of the 1980s surveys was georectified and overlaid on a current aerial image (Fig. 3). This shows that most of the current survey area is located north of the area previously

[1] Friday, G.P., D.E. Collins, A.M. Hale. 1986. Annual Report of Perry Plant Ecological Monitoring Program. NUS Corporation, Gaithersburg, Maryland.

identified as being occupied by Spotted Turtles. The two overlap along the transmission line right-of-way. The “abandoned field” identified in the 1980s is behind a security fence and could not be accessed for the current survey.

METHODS

On 2 April 2014, the project area was visited to examine the wetlands and other habitat found on the site. As this was prior to the leaf-out of the vegetation, a thorough inspection was possible (Fig. 4). The goal of this visit was to identify areas within the project area that may be suitable for supporting Spotted Turtles. Special attention was given to locations that appeared to have a longer hydroperiod, and are more likely to support a diverse aquatic community. This included looking for obligate wetland vegetation, listening for calling frogs, and noting salamander eggs and spermataphores. Also noted were wetlands having an open or partially open canopy, where Spotted Turtles are likely to remain after leaf-out, and also small streams, especially those that connect lentic habitats. Spotted Turtles are known to use such streams extensively, especially to travel between wetlands.

On 13 May 2014, 24 aquatic funnel traps (36" X 12", Promar TR-502) were deployed throughout the project area (Fig. 2). These traps were placed so that a portion of the trap was out of the water to prevent drowning of trapped organisms. Each trap was baited with canned sardines along with a decoy Spotted Turtle made from a toy turtle. Previous studies have shown that decoys increase Spotted Turtle captures[2]. At each location, traps were placed to maximize the likelihood of capturing turtles. This included using structures in the water such as logs or grass hummocks as natural drift fences to guide animals to the trap entrances. The ambient (air) and water temperature was recorded at each deployment or check of the traps.

Traps were checked daily. Organisms captured were identified, recorded, and released at the point of capture. Bait was replaced as needed.

Visual encounter surveys (VES) were conducted by slowly walking through the wetlands and scanning logs and the banks for basking turtles. In addition, polarized sunglasses allowed for observations of turtles in the water. VES occurred during the initial visit to the site and during trap placement, checking, and retrieval.

RESULTS

Trapping occurred from 13 May–16 May and 3–5 June 2014 for a total of 120 trap-days (5 days X 24 traps). The ambient temperature ranged from 8.7–28.6^{o}C (mean: 19.0^{o}C). Water temperature ranged from 12.9–23.4^{o}C (mean: 17.4^{o}C). A summary of the amphibians, reptiles, and crayfish captured in the traps is provided in Table 1 and photographs are provided in Figure 6. No state or federally listed amphibian or reptile species - including Spotted Turtles - were found at any of the three sites. Other amphibian species observed but not captured in the traps include the Spotted Salamander (*Ambystoma maculatum*, eggs and larvae), Jefferson Salamander (*Ambystoma jeffersonianum*, eggs), Wood Frogs (*Lithobates sylvaticus*), and Spring

[2] Mansfield, P., E.G. Strauss, and P.J. Auger. 1998. Using decoys to capture spotted turtles (*Clemmys guttata*) in water funnel traps. Herpetological Review 29:157-158.

Peepers (*Pseudacris crucifer*). An Eastern Gartersnake (*Thamnophis sirtalis sirtalis*) is the only other reptile observed during the survey.

Table 1. Amphibians, reptiles, and crayfish captured in aquatic funnel traps at the Perry Nuclear Power Plant. Numbers indicate the number of observations and not necessarily the number of distinct individuals; some individuals may have been captured more than once.

Species	Total Number Captured
Snapping Turtle (*Chelydra serpentina*)	3
American Toad (*Anaxyrus americanus*)	1
Green Frog (*Lithobates clamitans*)	11
Tadpole (*Lithobates sp.*)	2
Crayfish	73

The only turtle species detected at the PNPP was the Snapping Turtle. The three individuals captured in the traps included two yearling turtles and one juvenile. In addition to those three, an additional two small adult Snapping Turtles were observed during VES, one in a wetland along the transmission line right-of-way and one in a small stream within the forested tract north of the right-of-way.

CONCLUSION

No Spotted Turtles were detected within the PNPP project area. Trapping and VES took place during mid-May, when Spotted Turtle activity is greatest in Ohio, and also in early June, when turtles are likely to begin nesting and prior to their summer dormancy[3]. Using the same techniques, the author has captured over 100 Spotted Turtles across northern Ohio.

The previous Spotted Turtle surveys of PNPP from 1981–1986 using VES alone resulted in an average of nearly 26 captures per year (range: 20–40). The survey area of the 1980s, however, only slightly overlapped that of the current survey. It appears that most of the previous captures came from an area south of current survey, in an area of old field and shrub-scrub. This area is inside of a security fence and permission to access this area could not be obtained for the current survey.

There are three plausible explanations for the difference in the previous versus the current survey:

[3] Lovich, J.E. 1988. Geographic variation in the seasonal activity cycle of spotted turtles, *Clemmys guttata*. Journal of Herpetology 22(4):482-485.

1) Spotted Turtles at PNPP do not utilize the forested area north of the transmission line right-of-way, and the results of the current survey say nothing of the population previously surveyed;
2) Use of the project area by Spotted Turtles is rare, perhaps only occurring under specific environmental conditions not experienced during the current survey; or,
3) Spotted Turtles have been extirpated from PNPP.

Determining which of these explanations describes the current situation at PNPP would require expanding surveys to include the areas covered in the 1980s surveys. While this area is outside of the current project area, future surveys in the area would be important to further our understanding of the status of Spotted Turtles in the state and could also be useful in natural resource management plans for PNPP and potential mitigation opportunities. At the completion of the 1980s surveys, the PNPP Spotted Turtle population was believed to be the largest in the state.

The current survey did not detect Spotted Turtles utilizing the project area investigated during May and June of 2014. It is therefore my opinion that the project is unlikely to directly impact the Spotted Turtle.

I appreciate the opportunity to provide my services to First Energy. Please do not hesitate to contact me by email (GregLipps@gmail.com) or by phone (419-376-3441) should you have any further questions or wish to discuss this further.

Sincerely,

Gregory Lipps

Attachments: figures

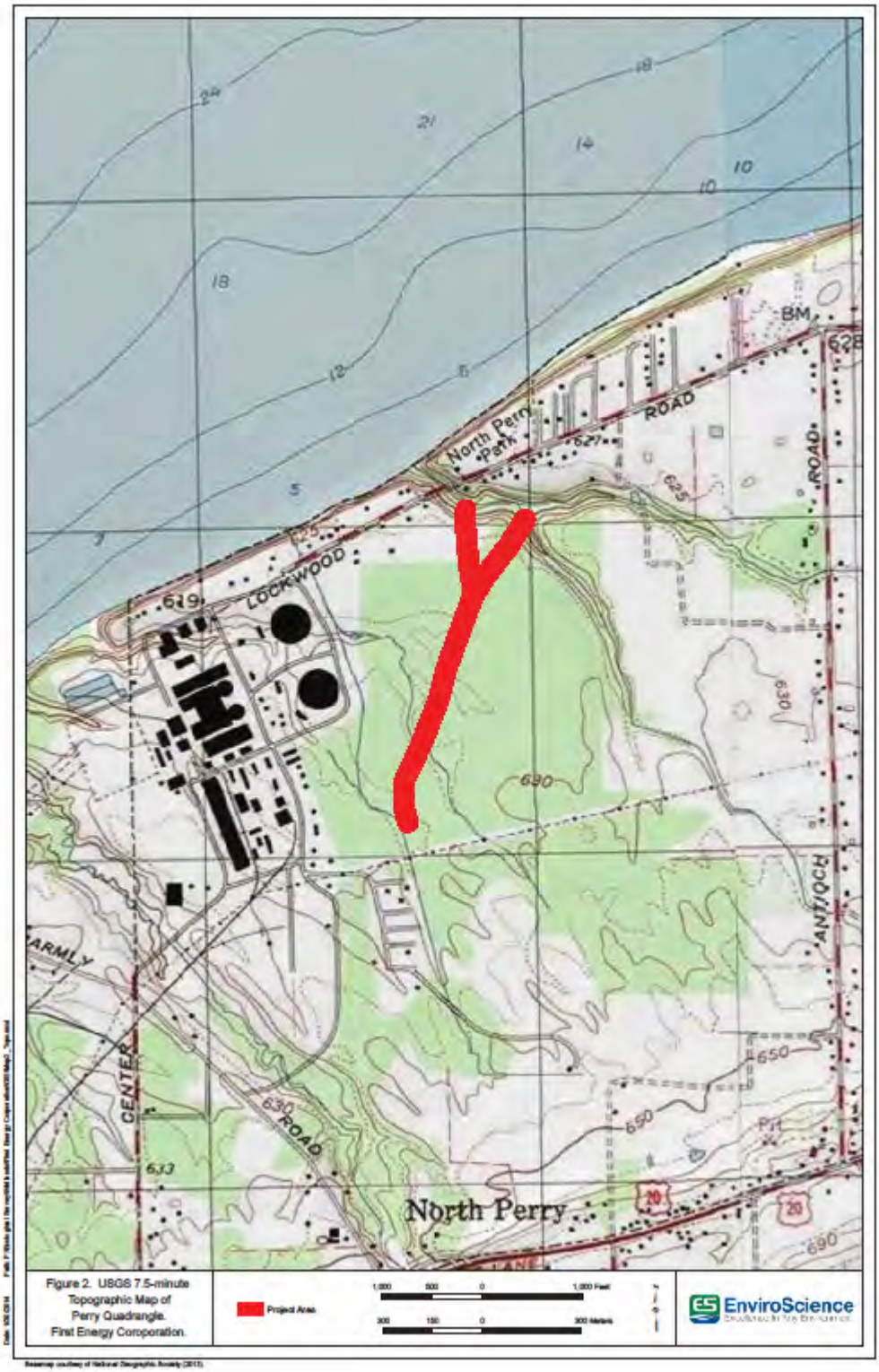


Figure 1. USGS 7.5 minute topographic map showing the location of the proposed project area at the Perry Nuclear Power Plant.

Figure 2. Aerial image showing locations of 24 turtle traps (yellow dots) at the Perry Nuclear Power Plant. Image: 2006 OSIP.

Figure 3. The area of Spotted Turtle habitat identified in the 1980s is shown overlaid on a Google Earth aerial image. Trapping locations of the current survey are indicated with yellow dots. The overlaid image was originally included as Figure 9 in the 1986 report with the caption "Habitat Interspersion at the Spotted Turtle (*Clemmys guttata*) Study Area, 1986." The text of the report states that the "principle study area for the spotted turtle on the PNPP…includes the…transmission line right-of-way, and the ephemeral pools and streams adjoining it to the south (Figure 9)." Most of this area is south of the current project area and behind a security fence and was not included in the current survey.

Figure 4. Examples of the wetlands observed within the project area on 2 April 2014 (top), prior to leaf-out of the vegetation and on 13 May 2014 (bottom).

Figure 5. Aquatic funnel traps in place in a small woodland stream (top) and in wetlands along the transmission line right-of-way (bottom). Traps were baited with sardines and a decoy (toy) Spotted Turtle.

Figure 6. Amphibians and reptiles observed during the survey, include Snapping Turtle (*Chelydra serpentina*) young (A) and adult (B); Green Frog (*Lithobates clamitans*, C); American Toad (*Anaxyrus americanus*, D); Eastern Gartersnake (*Thamnophis sirtalis sirtalis*, E); Spotted Salamander (*Ambystoma maculatum*) eggs (F); and, *Ambystoma* sp. spermataphores (G).

Kristin,

Thanks for providing these. Yes, the survey results certainly cover the area of potential stream re-route.

Greg

Gregory Lipps, LLC
1473 County Road 5 2
Delta, OH 43515
419-376-3441
GregLipps@gmail.com

New book now available: Amphibians of Ohio

"[W]e must give up the self-serving belief that an increase in our scientific knowledge by itself will always move us toward effective conservation."
-- Ehrenfeld, D. 2000. War and Peace and Conservation Biology. Cons Bio (14)1:105-112.

On Mon, Sep 8, 2014 at 7:26 AM, Susick, Kristin S <kssusick@firstenergycorp.com> wrote:

Hi Greg:

The attached two figures show the two potential options for the stream re-route. Let me know if your survey covered these areas.

Thanks,

Kristin

From: Greg Lipps [mailto:greglipps@gmail.com]
Sent: Saturday, September 06, 2014 10:33 AM
To: Susick, Kristin S
Cc: Beach, William R
Subject: Re: Update on herp projects

Kristin,

I'm not familiar with "Minor Creek" and can't find this on a map. If it is one of the two existing channels in the woodlot immediately east of the power plant (in the area surveyed), then the survey results would cover this. If it is elsewhere, I'll need to see a map of the location before commenting.

Thanks,

Greg

Gregory Lipps, LLC
1473 County Road 5 2
Delta, OH 43515
419-376-3441
GregLipps@gmail.com

New book now available: Amphibians of Ohio

On Mon, Aug 25, 2014 at 2:12 PM, Susick, Kristin S <kssusick@firstenergycorp.com> wrote:

Thanks Greg. We are looking at two other potential options for the Perry project. One option would have the new stream created just east of the east of the existing Minor Creek channel, the other would be a widening of the existing Minor Creek channel. With that in mind, would the results of your survey change at all/would you see a need to do additional sampling?

Thank you,

kristin

February 12, 2014

Angela Boyer
United States Fish and Wildlife Service
Ohio Field Office
Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993
Angela_Boyer@fws.gov

Re: Section 7 Endangered Species Act Consultation
Perry Nuclear Plant Property
Lake County, Ohio

Dear Ms. Boyer:

EnviroScience Inc. (ES) was contracted by FirstEnergy to coordinate endangered species project review for the Perry Nuclear Plant Property located in the City of North Perry, Lake County, Ohio. The latitude and longitude coordinates for the center point of the project area are 41.800742°N and -81.135022°W. To assist with your review several resource maps are included (Attachment A).

Project Purpose and Location

The purpose of FirstEnergy's Perry Nuclear Plant Property project is in response to the Nuclear Regulatory Commission's requirement to implement flood control measures at nuclear facilities in preparation for 500+ year flood event. The project includes diverting some flow from Minor Creek to create a new stream (S-1) running northeast and draining into East Stream (a perennial stream). S-1 will be approximately 3,800 feet and will drain northeastward into East Stream (a perennial stream) located along the eastern portion of the property. S-1 will be approximately 100 feet wide which includes the riparian corridor. A preliminary site reconnaissance has been conducted and the project area of approximately 4,200 lf by 200 lf will be surveyed following snow melt this spring. The 4,200 lf of project area to be surveyed includes two options for S-1 to enter East Stream.

Site Description

An aerial map (Attachment A; Figure 1) and a topographic map (Attachment A; Figure 2) of the project area are included for review. The maps show the project area as predominately forested with a small portion of new field in the northern portion of the project area. Four (4) streams are shown on the topographic map. These streams are indicated as perennial streams on the topographic map.

A preliminary sight reconnaissance of the project area was conducted in December 2013. The majority of the project area is composed of immature forested property with pockets of vernal pool wetland. Minor Creek (an intermittent stream) was observed flowing north to Lake Erie along the eastern edge of the Perry Nuclear Plant facility. East Creek (a perennial stream) was observed flowing northwest into Lake Erie. In order to complete the project, an area of approximately 8.7 acres (3,800 lf by 100 feet) will need to be cleared.

ES coordinated the site with the ODNR Division of Natural Areas and Preserves to obtain information on threatened and endangered species. ES requested records of rare, threatened and endangered species, unique ecological sites, geological features, animal assemblages, state wildlife areas, scenic rivers, nature preserves, parks and forests and other protected natural areas from the ODNR's Natural Heritage Database. ES also requested information on Indiana bat capture locations within a five mile radius or hibernacula within a ten mile radius of the project area. The ODNR's record results are located Attachment B.

Please consider the information above and respond with any potentially adverse effects to any federally listed, threatened, or endangered species within project area. A response to this request is appreciated prior to April 2014.

Please direct any questions and your response to Emma Kennedy at (330) 688-0111 and EKennedy@EnviroScienceInc.com.

Respectfully,

Emmalisa Kennedy
Wetland Ecologist

Enclosures

EnviroScience
5070 Stow Road
Stow, OH 44224

Toll Free: 800-940-4025 | Office: 330-688-0111 | Fax: 330-688-3858

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994

February 27, 2014

Emmalisa Kennedy
EnviroScience, Inc.
5070 Stow Road
Stow, Ohio 44224

Re: First Energy, Perry Nuclear Plant Property, Lake County, Ohio

Dear Ms. Kennedy,

TAILS# 03E15000-2014-TA-0787

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

The Service recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

ENDANGERED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the **Indiana bat** (*Myotis sodalis*), a federally listed endangered species. Since first listed as endangered in 1967, their population has declined by nearly 60%. Several factors have contributed to the decline of the Indiana bat, including the loss and degradation of suitable hibernacula, human disturbance during hibernation, pesticides, and the loss and degradation of forested habitat, particularly stands of large, mature trees. Fragmentation of forest habitat may also contribute to declines. During winter, Indiana bats hibernate in caves and abandoned mines. Summer habitat requirements for the species are not well defined but the following are considered important:

(1) dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas;

(2) live trees (such as shagbark hickory and oaks) which have exfoliating bark;
(3) stream corridors, riparian areas, and upland woodlots which provide forage sites.

It appears that habitat exhibiting the characteristics described above may be present in the project area. Therefore, we recommend that any trees exhibiting any of the characteristics listed above, as well as surrounding trees, be saved wherever possible. However, if these trees cannot be avoided, they should only be cut between October 1 and March 31. Alternatively, a summer survey could be conducted to determine presence or probably absence of this species. Surveyors must have a valid Federal permit.

If there is a Federal nexus for the project (Federal funding provided, Federal permits required to construct, etc.) then no tree clearing on any portion of the parcel should occur until consultation under section 7 of the Endangered Species Act of 1973, as amended, between the Service and the Federal action agency is completed. We recommend that the Federal action agency submit to this office a determination of effects to the Indiana bat for our review and concurrence.

If the applicant plans to clear trees prior to issuance of a 404 and/or 401 permit the following two conditions must be adhered to: 1) Section 7 consultation for the Indiana bat between the Service and the Corps of Engineers must be completed; and 2) No tree clearing on any portion of the parcel should occur until both the Corps and the Ohio EPA anticipate that issuance of both a 404/NWP and a 401 permit authorizing the project as a whole is imminent. This will ensure that clearing will be limited to the footprint of whichever alternative is ultimately permitted, and that no unnecessary clearing will occur. No tree clearing should occur until these two conditions have been satisfied.

All projects in the State of Ohio lie within the range of the **northern long-eared bat** (*Myotis septentrionalis*), a species that is currently proposed for listing as federally endangered. Recently white-nose syndrome (WNS), a novel fungal pathogen, has caused serious declines in the northern long-eared bat population in the northeastern U.S. WNS has also been documented in Ohio, but the full extent of the impacts from WNS in Ohio are not yet known.

During winter, northern long-eared bats hibernate in caves and abandoned mines. Summer habitat requirements for the species are not well defined but the following are considered important:

(1) Roosting habitat in dead or live trees and snags with cavities, peeling or exfoliating bark, split tree trunk and/or branches, which may be used as maternity roost areas;
(2) Foraging habitat in upland and lowland woodlots and tree lined corridors;
(3) Occasionally they may roost in structures like barns and sheds.

Should the proposed site contain trees or associated habitats exhibiting any of the characteristics listed above, we recommend that the habitat and surrounding trees be saved wherever possible. If the trees must be cut, further coordination with this office is requested to determine if surveys are warranted. Any survey should be designed and conducted in coordination with the Endangered Species Coordinator for this office.

The proposed project lies within the range of the **Kirtland's warbler** (*Setophaga kirtlandii*), a federally listed endangered species. The Kirtland's warbler is a small blue-gray songbird with a bright yellow breast. This species migrates through Ohio in the spring and fall, traveling between its breeding grounds in Michigan, Wisconsin, and Ontario and its wintering grounds in the Bahamas. While migration occurs in a broad front across the entire state, approximately half of all observations in Ohio have occurred within 3 miles of the shore of Lake Erie. During migration, individual birds usually forage in shrub/scrub or forested habitat and may stay in one area for a few days.

Migration is energetically demanding for birds of all species. During stop-over, birds are often faced with the need to acquire food in a short period of time, in unfamiliar surroundings, and while avoiding predators and competing with other migrants and resident birds for limited resources. Studies with captive migrants suggest that individuals in migratory disposition compensate for lost nighttime sleep by increasing the frequency of daytime sleep-like behaviors, potentially rendering them less able to quickly respond to disturbance.

In the spring, migrating Kirtland's warblers stopping over in Ohio will have traveled thousands of miles, will be immediately in need of food to satisfy energetic demands, and are thought to be racing to the breeding grounds to establish territories as early as possible. While fall migration is typically not as fast-paced as spring migration, it appears that fall migrating Kirtland's warblers do not build up fat reserves prior to initiating migration, and therefore nearby stopover habitat would be increasingly important for this species. Because so much of the southern Lake Erie shoreline is already developed, and stopover habitat is already so fragmented, a conservative approach such as avoiding impacts to suitable stopover habitat during the migratory period is appropriate to avoid and minimize potential adverse effects to Kirtland's warbler, as well as other migratory song birds.

Based on migration records of Kirtland's warbler in Ohio, as well as documented phenological patterns across the species' range, we recommend that suitable migration stopover habitat (scrub/shrub and forest habitat) within 3 miles of the shoreline of Lake Erie should be preserved whenever possible. If clearing of suitable habitat cannot be avoided, to preclude adverse effects to Kirtland's warblers, clearing within 3 miles of the shoreline of Lake Erie should not occur from April 22nd – June 1st, or from August 15th – October 15th.

BALD EAGLE COMMENTS: The project lies within the range of the **bald eagle** (*Haliaeetus leucocephalus*). Bald eagles are protected under the Migratory Bird Treaty Act (16 U.S.C. 703-712; MBTA), and are afforded additional legal protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, BGEPA). BGEPA prohibits, among other things, the killing and disturbance of eagles. To evaluate your project's potential to affect bald eagles, please visit: http://www.fws.gov/midwest/MidwestBird/EaglePermits/baeatake/index.html.

While our database of nest locations may not be complete because new nests are built each year, we currently have no records of bald eagle nests within ½ mile of your proposed project area. In order to avoid take of bald eagles, we recommend that no tree clearing occur within 660 feet of a bald eagle nest or within any woodlot supporting a nest tree. Further we request that work within 660 feet of a nest or within the direct line-of-site of a nest be restricted from January 15 through

July 31. This will prevent disturbance of the eagles from the egg-laying period until the young fledge, which encompasses their most vulnerable times.

If these recommendations cannot be implemented and take of bald eagles is likely, a bald eagle take permit for this project may be necessary. Further information on eagle take permits can be found at: http://www.fws.gov/midwest/MidwestBird/EaglePermits/index.html.

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

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (ESA), as amended, and are consistent with the intent of the National Environmental Policy Act of 1969 and the U. S. Fish and Wildlife Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Division of Wildlife due to the potential for the project to affect state listed species. Contact Nathan Reardon, Environmental Review Coordinator with the Division of Wildlife, at (614) 265- 6741 or at Nathan.Reardon@dnr.state.oh.us.

If you have questions, or if we may be of further assistance in this matter, please contact Angela Boyer at extension 22 in this office.

Sincerely,

Mary Knapp

Mary Knapp, Ph.D.
Field Supervisor

cc: Nathan Reardon, ODNR, Division of Wildlife
Jennifer Norris, ODNR, Division of Wildlife

Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR | JAMES ZEHRINGER, DIRECTOR

October 1, 2014

Sent via e-mail

FirstEnergy Corporation
Attn: Kristin S. Susick
76 South Main Street
Akron, Ohio 44308
KSSusick@firstenergycorp.com

Re: Site Visit Report for 10 Center Road, North Perry, Lake County, 14-TALA-002

Dear Ms. Susick:

Thank you for meeting with the Ohio Department of Natural Resources, Office of Coastal Management to review your proposed project along the shore of the located at 10 Center Road in North Perry, Lake County. Enclosed with this letter is a copy of the Site Assessment Report which includes observations made during the site visit, background information about the site, proposed project description and a summary of our discussions.

The Site Assessment Report also includes several recommendations regarding your proposed project and for submitting an application(s) for a Shore Structure Permit and/or Submerged Lands Lease.

If you have any questions regarding this letter please contact either of us at (419) 626-7980. Thank you for your cooperation in helping to protect Lake Erie, Ohio's greatest natural resource.

Sincerely,

Jason Trapp, E.I.
Natural Resources Engineer

Virginia Bahs
Property Management Specialist

Enclosure: Site Visit Assessment Report

ec: Scudder D. Mackey, Ph. D., Chief, Office of Coastal Management
Steve Holland, Federal Consistency Administrator, Office of Coastal Management
Saadat O. Rouhani, FirstEnergy Nuclear Operating Company
Emmalisa Kennedy, EnviroScience, Inc.
cc: File

Inspection Photos, Plat & Aerial Imagery

Photographs that best represent the site are attached to this report.

2012 USACE oblique aerial photograph of the project area along the eastern extent of the existing bulkhead and basin culvert. The proposed channel spillway option would be constructed along the top of bluff area to outlet the landward basin to Lake Erie.

2012 USACE oblique aerial photo of the project area east of the existing bulkhead. The proposed open channel will outlet to Lake Erie along this area. The upper bluff sand layer is light brown in color, whereas the till material is grey or darker brown in color.

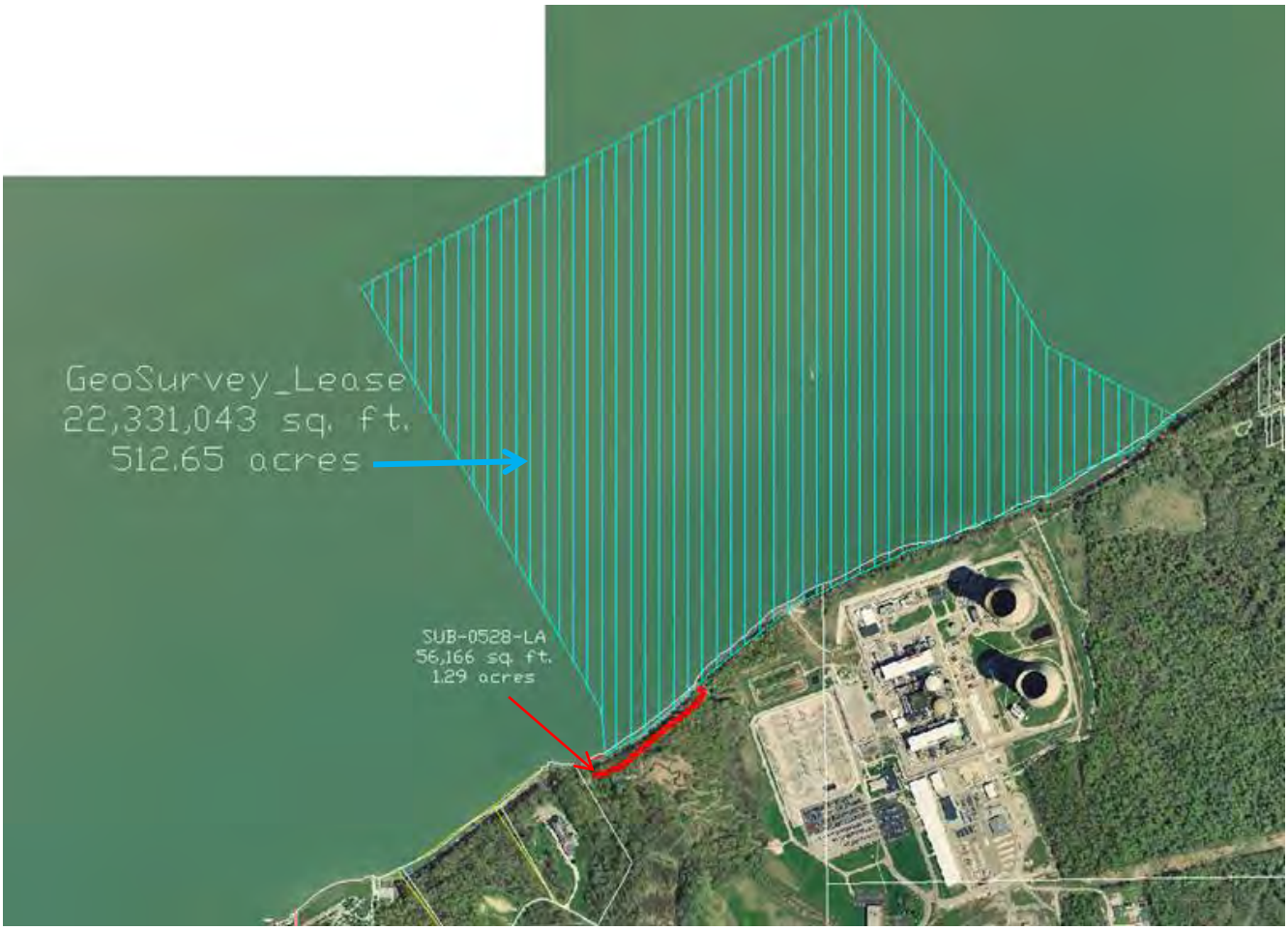
2011 aerial imagery with the County Auditor's 2010 parcel overlay. Site conditions and approximate project locations identified.

1986 aerial imagery with the County Auditor's 2010 parcel overlay. Site conditions after installation of the existing bulkhead. Note the erosion that has occurred east of the bulkhead based on a comparison with the 2011 imagery.

1980 aerial imagery with the County Auditor's 2010 parcel overlay. Site conditions prior to installation of the existing bulkhead. Note the existing basin and culvert.

Photo 1: View of the native bluff area east of the existing bulkhead where the proposed channel will be constructed.

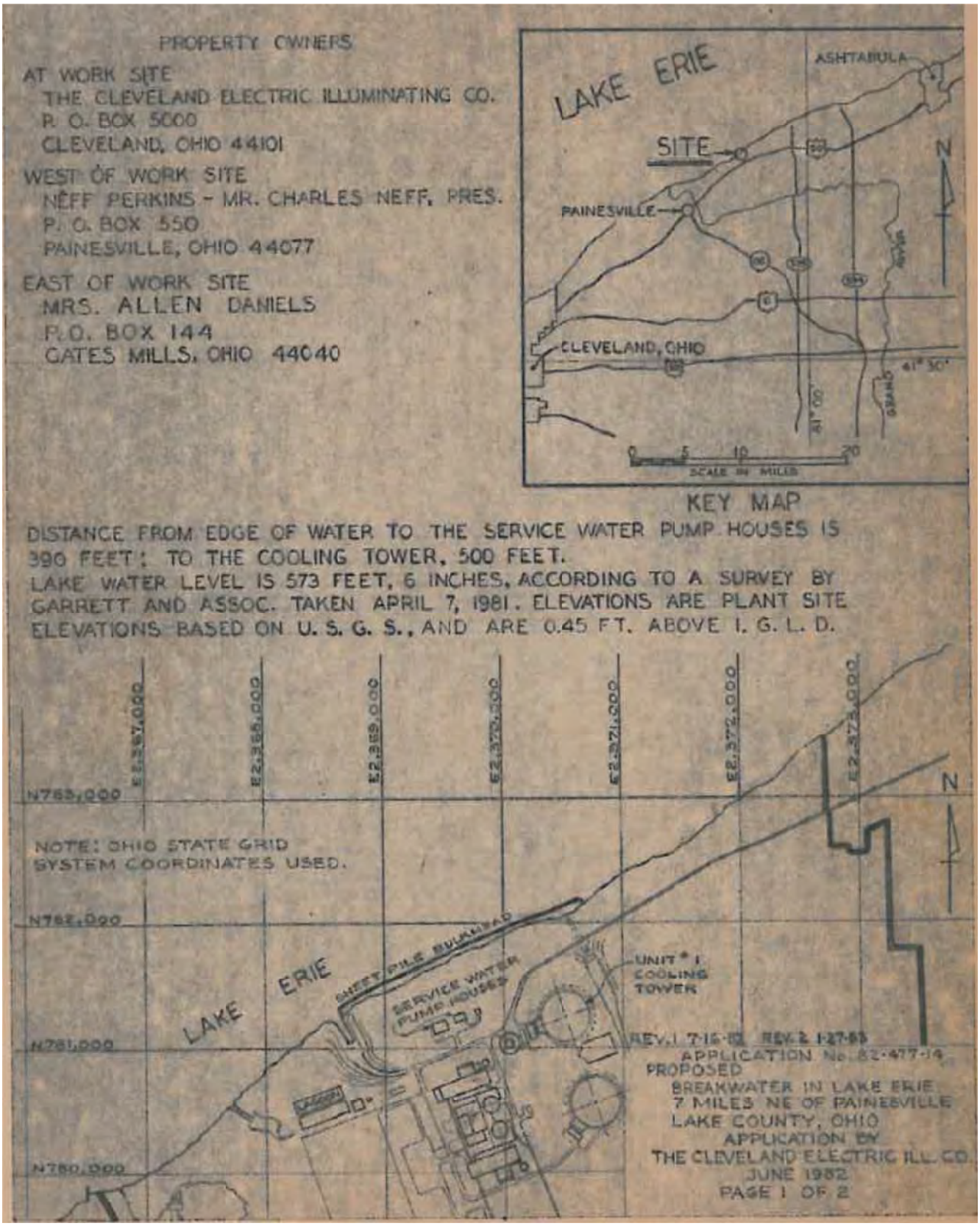
Photo 2: View of the sandy material capping the till bluff.



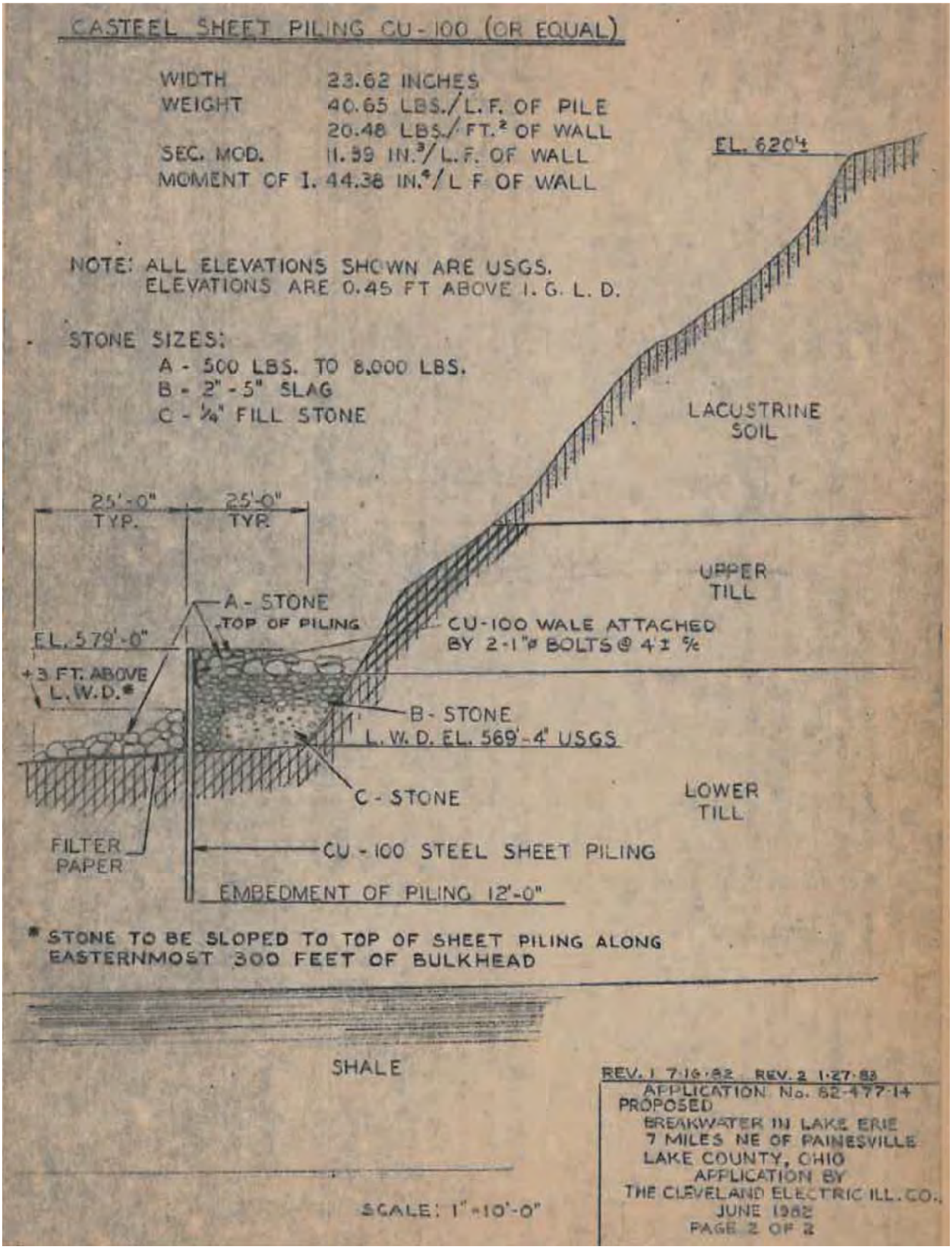
Approximate locations of existing Submerged Lands Lease (red) & Minerals Non-Extraction Lease (cyan)

Project Drawings & ODNR Authorizations

Design and/or permit drawings along the area of the proposed project.



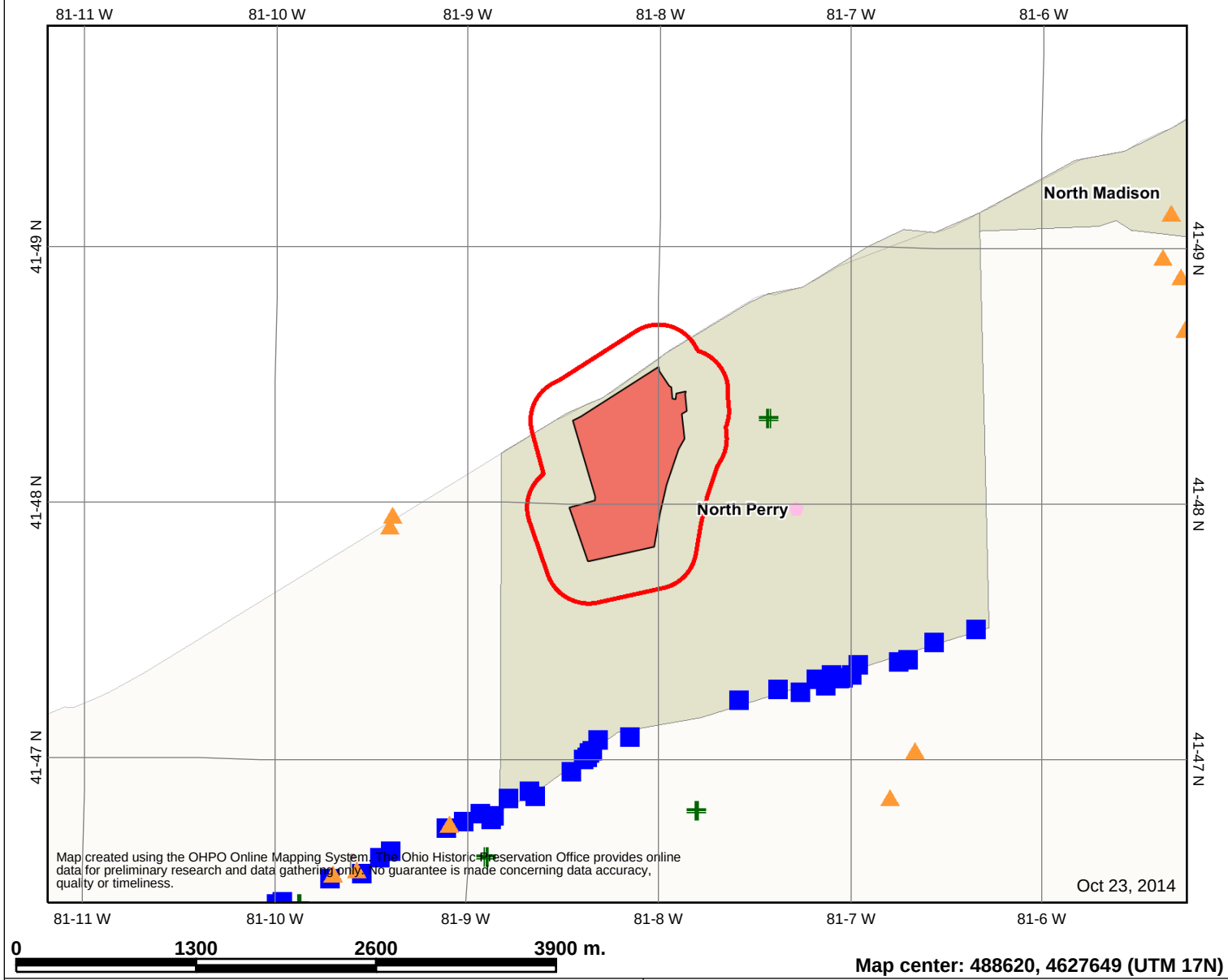
Shore Structure Permit 83-02 (Page 1 of 2)



Shore Structure Permit 83-02 (Page 2 of 2)

Ohio Historic Preservation Office

FirstEnergy Corporation



Map center: 488620, 4627649 (UTM 17N)

Legend

- Buffer (1000 ft)
- Project Area
- NR Determinations of Eligibility
- National Road
- Highways
- National Historic Landmarks
- National Register Listings
- Archaeological Sites
- Historic Structures
- OGS Cemeteries
- Phase 1
- Phase 2
- Phase 3
- National Register Boundaries
- Cities
- Counties

N

Scale: 1:44,355

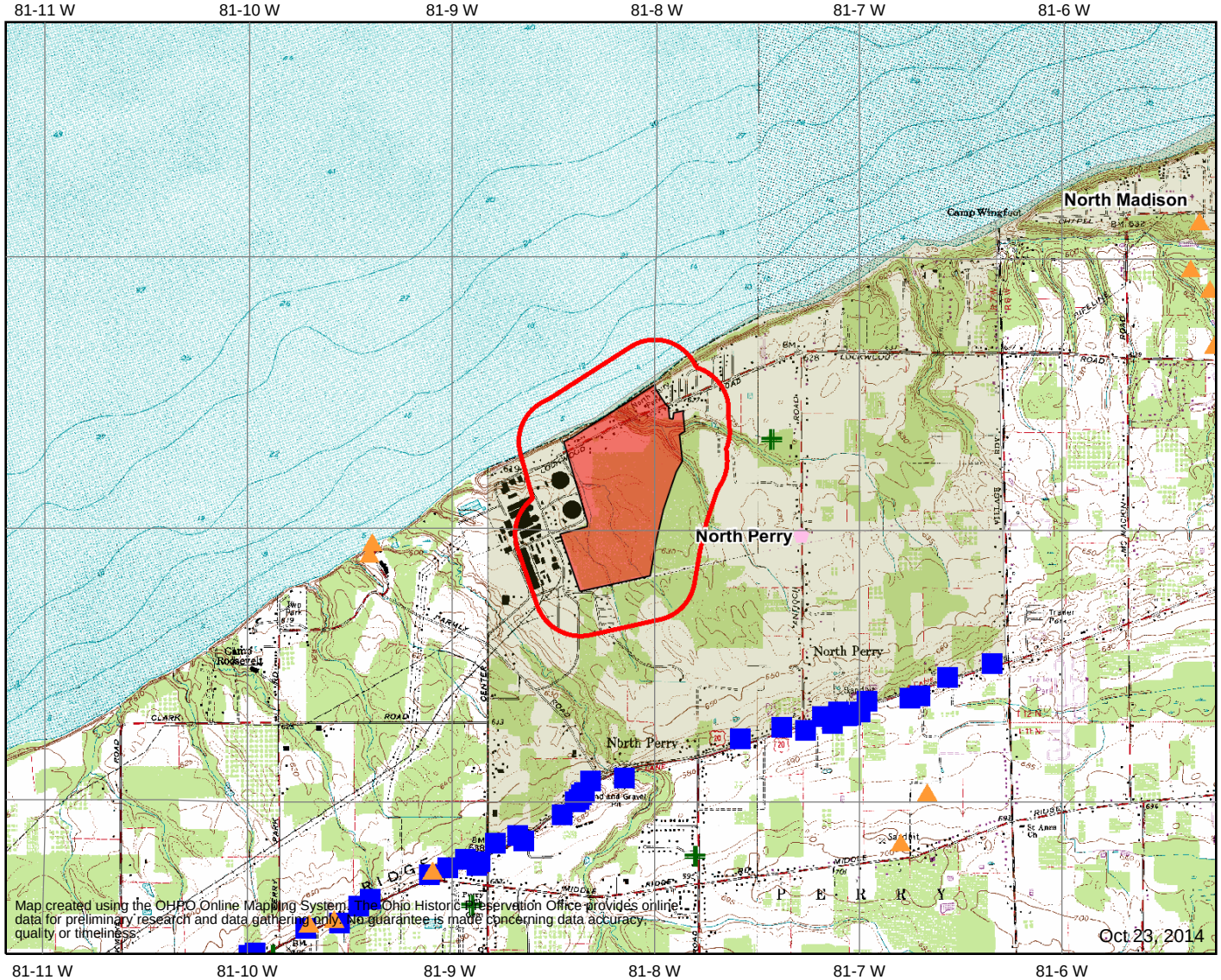
This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: FirstEnergy Corporation (Perry Quadrangle, Lake County).

Date Created: 10/23/2014

Ohio Historic Preservation Office

FirstEnergy Corporation



0 1300 2600 3900 m.

Map center: 488620, 4627649 (UTM 17N)

Legend

- Buffer (1000 ft)
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This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: FirstEnergy Corporation (Perry Quadrangle, Lake County).

Date Created: 10/23/2014

Site Name: FirstEnergy Corporation
County: Lake
Quadrangle: Perry

Ohio Archaeological Inventory (Archaeological Sites) **TOTAL:** 0

NUMBER	SITE NAME	UTM ZONE	EASTING	NORTHING

No resources found within radius

Ohio Historic Inventory (Historic Structures) **TOTAL:** 0

NUMBER	PRESENT NAME	OTHER NAME	ADDRESS	UTM ZONE	EASTING	NORTHING

No resources found within radius

National Register Listed Properties (National Register Listings) **TOTAL:** 0

NUMBER	RESOURCE NAME	ADDRESS	UTM ZONE	EASTING	NORTHING

No resources found within radius

Determinations of Eligibility (NR Determinations of Eligibility) **TOTAL:** 0

SER NO	PROJECT NAME	ADDRESS	UTM ZONE	EASTING	NORTHING

No resources found within radius

Phase 1, 2, and 3 Surveyed Areas (Phase 1, 2, and 3) **TOTAL:** 0

NUMBER	PHASE	AUTHOR	YEAR	TITLE

No resources found within radius

National Register Listed Districts (National Register Boundaries) **TOTAL:** 0

NUMBER	NAME	OTHER NAME	PROPERTIES

No resources found within radius