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**Construction Notice for
Licking Trails (Line 3-E)
Pipeline Replacement Project
Licking Township, Licking County, Ohio**

NGO TRANSMISSION, INC.

**Ohio Power Siting Board
Case No. 17-1476-GA-BNR**

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1500 Granville Road, P.O. Box 4970
Newark, OH 43058-4970

July 3, 2017

Mr. Patrick Donlon
Executive Director
Ohio Power Siting Board
180 East Broad Street, 6th Floor
Columbus, OH 43215

Ms. Barcy McNeal
Administration/Docketing
Ohio Power Siting Board
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3793

Re: NGO Transmission, Inc. Construction Notice for Pipeline Replacement Project (Line 3-E), Licking Township, Licking County, Ohio, Case No. 17-1476-GA-BNR

Dear Mr. Donlon and Ms. McNeal:

Enclosed for filing in the above-referenced case is a copy of the Construction Notice Application of NGO Transmission, Inc. ("NGOT") d/b/a The Energy Cooperative to replace a section of pipeline by installing 1,600 feet of 10-inch diameter natural gas pipeline (Line 3-E) in Licking Township, Licking County Ohio. The project will be within NGOT's existing easement and public right of way. In addition, we have provided the Staff of the Ohio Power Siting Board with hard copies of the Application.

Applicant: NGO Transmission, Inc.
1500 Granville Road
P.O. Box 4970,
Newark, OH 43058-4970

Project Location: Licking Township, Licking County, Ohio

Authorized Technical Representative: Don Wheeler, Operations Manager
P.O. Box 4970
(740) 348-1211/ dwheeler@theenergycoop.com

Authorized Legal Representative: Lija Kaleps-Clark, Esq.
Director of Land & Legal Services
P.O. Box 4970
(740) 348-1212/ lija@theenergycoop.com

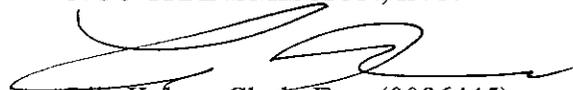
Project Description: NGOT is planning to replace approximately 1,600 feet of existing 8-inch diameter pipeline, with 1,600 feet of new 10-inch diameter natural gas pipeline within existing NGOT easement or public right-of-way. The pipeline will be installed by boring the pipeline underneath Interstate 70 in public road right-of-way and then in an

existing easement area on land used for agricultural purposes and located south of I-70. The pipeline will then be bored under Licking Trails Road (Township Road 303) and connected to a regulator station on the east side of the road.

Anticipated Project Schedule: The construction of the pipeline is anticipated to begin on or about October 1, 2017. NGOT plans to place the line in-service in November 2017.

A notarized Statement by the authorized technical representative is attached.

Respectfully submitted on behalf of
NGO TRANSMISSION, INC.



Lija Kafeps-Clark, Esq. (0086445)
Director of Land and Legal Services

BEFORE THE OHIO POWER SITING BOARD

In the Matter of the Construction Notice of :
NGO Transmission, Inc. for Line 3-E :
Pipeline Replacement Project, Licking : Case No: 17-1476-GA-BNR
Township, Licking County, Ohio :
:

AFFIDAVIT OF DONALD WHEELER, NGO TRANSMISSION, INC.

STATE OF OHIO :
: ss
COUNTY OF LICKING :

I, Donald Wheeler, being duly sworn and cautioned, state that I am more than 18 years of age and competent to testify to the matters stated in this affidavit and further state the following based upon my personal knowledge:

- 1. I am the Operations Manager for NGO Transmission, Inc. and am authorized to execute this Affidavit.
- 2. I have reviewed the NGO Transmission, Inc. Construction Notice Application in the above referenced case.
- 3. To the best of my knowledge, information, and believe, the above-referenced Application is complete.


Donald Wheeler

Sworn to and subscribed before me this 30th day of June 2017.



Lija Kaleps-Clark, Attorney At Law
NOTARY PUBLIC - STATE OF OHIO
My commission has no expiration date
Sec. 147.03 R.C.


Notary Public

Case No. 17-1476-GA-BNR
LICKIGN TRAILS (LINE 3-E) PIPELINE REPLACEMENT PROJECT,
LICKING TOWNSHIP, LICKING COUNTY, OHIO

NGO Transmission, Inc. (“NGOT”) submits this Construction Notice, pursuant to Ohio Admin. Code 4906-6-03(C) and 4906-6-05, concerning a proposed pipeline replacement known as the Licking Trails Replacement Project (the “Project”). As required by Ohio Admin. Code 4906-6-05, NGOT provides the following information:

(1) The name of the project and applicant’s reference number, names and reference number(s) of resulting circuits and a brief description of the project, and why the project meets the requirements for a construction notice.

The Project is identified as the Licking Trails Replacement Project. The Project involves the replacement of a section of 8-inch, bare steel pipeline with approximately 1,600 feet of 10-inch coated steel main. All main in the scope of the project will be designed and tested for a Maximum Allowable Operating Pressure (“MAOP”) of 275 psig and is currently operating at an MAOP of 250 psig. Due to the age and condition of the pipe, as well as the number of historic leaks on the pipe, NGOT has identified this section of pipeline for replacement. NGOT will be boring the pipeline underneath Interstate 70 (I-70) and the associated right of way. NGOT will replace the section of pipeline on the property located south of I-70 by trenching. The pipeline will then be bored under Licking Trails Road (Township Road 303) and connected to a regulator station on the east side of the road. The location of the project is shown on Appendix A. This project qualifies as a Construction Notice because it fits the criteria of OAC Rule 4906-1-01, Appendix B (1)(a) which provides for the installation of a pipeline segment if it is not greater than one (1) mile in length. In this instance, the installation project is less than one (1) mile in length.

(2) If the proposed construction notice project is an electric power transmission line or gas pipeline, a statement explaining the need of the proposed facility.

NGOT currently uses the pipeline to supply natural gas to National Gas & Oil Cooperative's gas distribution system. Due to the age and condition of this section of pipeline, as well as the number of historic leaks on the pipe, NGOT has identified this pipeline for replacement.

- (3) The location of the project in relation to existing or proposed lines and substation shown in an area system map of sufficient scale and size to show existing proposed transmission facilities in the project area.**

A map showing the location and proposed work of the Project is attached as Appendix A.

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

Other routes that were considered would have increased the length of the project significantly, would have required NGOT to locate the pipeline in a new location, and would have a minimum change in impact on the existing property owner. Replacing the main along the proposed route, which is in the same location as the existing pipeline, is the most economical and least disruptive way to replace this pipeline while also maintaining safe and reliable gas supply.

- (5) Describe the public information program to inform affected property owners and tenants of the nature of the project and the proposed timeframe for project construction and restoration activities.**

NGOT has notified the affected landowners of the upcoming Project by letter and intends to schedule in person meetings or phone calls to answer any additional questions. NGOT has obtained the permit for the road crossing from the Ohio Department of Transportation ("ODOT") and is in the process of obtaining the permit from the Licking Township Trustees. Information will be updated and delivered to stakeholders in a timely fashion as the Project progresses.

- (6) The anticipated construction schedule and proposed in-service date of the Project.**

Construction of the Project is planned to start on or about October 1, 2017, and the in-service date of the Project is expected to be on or about November 1, 2017.

- (7) An area map of not less than 1:24,000 scale clearly depicting the facility's centerline, with clearly marked streets, roads, and highways, and an aerial image.**

Please see the map attached as Appendix A.

- (8) A list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the facility and a list of additional properties for which such agreements have not been obtained.**

NGOT has existing easements on the 27.757 acre and 54.16 acre properties owned by Cheri L. Garvin, Trustee and located south of I-70. The replaced pipeline will be located in the same area as the existing pipeline. NGOT has obtained the necessary permit to install across I-70 from ODOT and is in the process of obtaining the necessary permit to install across Licking Trails Road (TR 303) from the Licking Township Trustees.

- (9) Technical features of the project.**

- a. Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.**

The 1,600 feet of 10-inch coated steel main will have a designed MAOP of 275 psig (with an initial operating MAOP of 250 psig) and will be installed up to a regulator station (Harbor Hills regulator station) on the east side of Licking Trails Road. The pipeline will be installed on private property, State of Ohio road right of way property, and Licking Township road right of way. Prior to construction, NGOT will acquire any permits required from Licking Township and ODOT for road crossings.

- b. For electric power transmission lines that are within 100 feet of an occupied residence or institution, the production of electric and magnetic fields during**

the operations of the proposed electric power transmission line. The discussion shall include:

- i. Calculated electric and magnetic field strength levels at one meter above ground under the lowest conductors and at the edge of the right-of-way for: (a) Normal maximum loading, (b) Emergency line loading, (c) Winter normal conductor rating.**
- ii. A discussion of the applicant's consideration of design alternatives with respect to electric and magnetic fields and their strength levels, including alternate conductor configuration and phasing, tower height, corridor location, and right of way width.**

Not applicable to this Project.

c. The estimated cost of the project.

The estimated capital cost of the Project is approximately \$175,000.

(10) Social and Ecological Impacts of the Project.

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

The Project is located near the intersection of I-70 and Licking Trails Road in Licking Township, Licking County, Ohio. According to August 2016 parcel data provided through the Licking County Auditor, the project area associated with the Project is comprised of zoned agricultural land and state-owned roadway right-of-way associated with I-70. Given the characteristics of the project area, population density within or directly adjacent to the Project is minimal. Approximately 1,240 feet of the Project is located within an actively managed agricultural field. The remainder of the pipeline corridor traverses below I-70 and Licking Trails Road. Minor amounts of wooded/scrub-shrub habitat is located along the southern right-of-way limits of I-70. As proposed, little to no tree clearing is anticipated during construction of the Project. However, if tree clearing is determined to be necessary, removal of all trees ≥ 3 inches dbh will occur between October 1st and March 31st. Given the nature of the proposed action, no changes to existing land use or zoning designations are anticipated.

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

Approximately 1,240 feet of the Project is located in an agricultural field that is actively managed for row-crop production. According to data from the Licking County Auditor's Office, no designated Agricultural District lands are located within the project area. Construction of the Project will occur within the existing NGOT easement and will not have any long-term impacts on crop production or agricultural use. All land affected during construction will be restored to pre-construction conditions, to the greatest extent practicable. Crop yield and pricing information will be obtained from landowners as a means of establishing compensation for any crop damage incurred as a result of construction activities.

- c. A description of the applicant's investigation concerning the presence or absence of significant archaeological or cultural resources 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.**

Based on a review completed by NGOT, and its contractor EMH&T, it was determined that there are no known significant archaeological or cultural resources within the project area. Please see Appendix B for a map of the project area overlaid with Ohio Historic Preservation Office ("OHPO") data as well as a Cultural Resource Management Literature Review.

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

NGOT has acquired an ODOT right of way permit for its work and will be acquiring a right of way permit from the Licking Township Trustees. If determined to be necessary, NGOT will also

obtain an Ohio Environmental Protection Agency construction stormwater permit should greater than one acre of land be disturbed as a result of construction activities. NGO has also coordinated with the U.S. Fish and Wildlife Service and the Ohio Department of Natural Resources, as detailed in this submission.

A copy of this Construction Notice has been sent to the following public officials concurrently with submittal to OPSB.

Licking County:

County Commissioners:	Duane Flowers Rick Black Timothy E. Bubb The Donald E. Hill County Administrative Building 20 South 2 nd Street, Newark OH 43055
County Planning and Development:	Gerald A. Newton, Development Executive Director Licking Co. Planning & Development 20 South 2 nd Street, Newark OH 43055
County Engineer:	Jared Knerr, PE, PS Licking Co Engineer's Office 20 South 2 nd Street, Newark OH 43055
Soil & Water Conservation:	Denise Natoli Brooks District Program Administrator Licking Co. Soil & Water Conservation District 771 East Main Street, Ste 100, Newark OH 43055

Licking Township, Licking Co.:

Township Trustees:	Joe Hart 5211 White Chapel Road Newark OH John Holman 8228 Licking Trails Road Thornville OH Dave Miller 7550 White Chapel Road Newark OH
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Township Zoning Officer:	Forrest Cooperrider 13047 National Road, Thornville OH
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- e. 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 findings of the investigation, and a copy of any document produced as a result of the investigation.**

NGOT, through its contractor EMH&T, inquired with U.S. Fish and Wildlife Service (“USFWS”) and Ohio Department of Natural Resources (“ODNR”) requesting information pertaining to the presence or absence of federal or state designated species. Coordination with the USFWS was initiated on April 10, 2017 to gather information regarding federal wilderness areas, wildlife refuges or designated critical habitat, and federally-listed species within vicinity of the project area. Early coordination efforts included a review of the most recent (January 2017) list of endangered and threatened species in Licking County, Ohio. According to the USFWS, the following three (3) species are indicated for Licking County: *Myotis sodalis* (Indiana bat) – endangered, *Myotis septentrionalis* (northern long-eared bat) – threatened, and *Sistrurus catenatus* (Eastern massasauga) – threatened. Additionally, the bald eagle is protected under the Bald and Golden Eagle Protection Act. In April 2017, a representative from EMH&T reviewed the project corridor for suitable habitat for federally-listed species to be located within Licking County, Ohio. This width of the study area included a 60 foot corridor located within the existing NGOT easement located between Licking Trails Road and the Project’s terminus located immediately north of I-70.

According to correspondence received from the USFWS on April 14, 2017, there are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The USFWS recommended that if impacts to trees ≥ 3 inches dbh are unavoidable, all tree clearing activities occur between October 1st and March 31st. Given the above information, the USFWS concluded that due to the project type, size, and location, adverse effects to federally endangered, threatened, proposed, or candidate species are not anticipated as a result of the proposed project. A copy of the USFWS coordination request letter and correspondence received from the USFWS is included in Appendix C.

Coordination with the ODNR Division of Wildlife (“DOW”) was initiated on April 10, 2017. In correspondence dated April 17, 2017, in a review of the Natural Heritage Database, the ODNR has no records for any rare or endangered species or other significant features within the project area or a one-mile radius. It was noted that Buckeye Lake State Park is located to the south, within a one-mile radius of the project area. The DOW does not have any records of an Indiana Bat capture location within a five (5) mile radius of the project area or hibernacula within a ten (10) mile radius of the project site. The DOW has insufficient data concerning the northern long-eared bat to respond to the request for information concerning that species. The nearest bald eagle nest is approximately four (4) miles to the west-southwest of the project area. A copy of the ODNR coordination request letter and correspondence received from ODNR is included in Appendix C.

EMH&T conducted a field review of the proposed pipeline alignment in April 2017. Given that the project is located within range of the Indiana bat, northern long-eared bat, and Eastern massasauga, special attention was paid to critical habitats associated with these species. Aside

from minimal wooded/scrub-shrub habitat located along the southern I-70 right-of-way line, the corridor is absent of unique ecological sites and/or high quality habitat. Based on EMH&T's review and coordination with the USFWS and ODNR, NGOT has concluded that construction of the proposed undertaking will not adversely affect any of the previously mentioned species.

- f. A description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state parks, floodplains, wetlands, designated or proposed wildlife areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the area likely to be disturbed by the project, a statement of findings of the investigation, and a copy of any document produced as a result of the investigation.**

NGOT's contractor, EMH&T, reviewed the topographic features of the Project, the mapped soils from the USDA-Natural Resources Conservation Service, Federal Emergency Management Agency ("FEMA") maps, and the USFWS National Wetland Inventory ("NWI"). As a result of these reviews, no wetland features were identified within the pipeline corridor and no floodway areas or drainage ways were mapped within or near the site. According to the Licking County Soil Survey from 1992, two (2) intermittent drainage ways were located within the pipeline corridor. No additional drainage ways, open water features, marsh symbols, or wet spots are mapped within or adjacent to the site. EMH&T conducted a field investigation of the corridor on April 6, 2017 to determine the location, extent, and quality of potential waters of the United States, including wetlands and streams. The investigation did not identify any potential wetlands, streams, or other potentially jurisdictional features within the corridor. EMH&T concluded that, in its opinion, construction of the proposed pipeline will not result in impacts to a wetland, stream, or other jurisdictional feature. NGOT confirmed with the USFWS (please see correspondence in Appendix C) that there are no federal wilderness areas, wildlife refuges, or

designated critical habitat within the vicinity of the project area. EMH&T's Waters of the US Investigation Memo is attached as Appendix D.

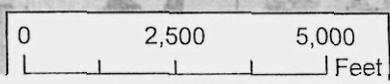
g. Any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

To the best of NGOT's knowledge, there are no readily known conditions in the area that could result in significant environmental impacts. The Project proposes to replace an existing pipeline within an existing pipeline easement. Ground disturbance has occurred throughout the project corridor due to previous construction activities and ongoing agricultural practices. Other than potential health and safety issues related to construction activities, no additional health, social, or safety impacts are anticipated as a result of this Project.

Case No. 17-1476-GA-BNR
LICKIGN TRAILS (LINE 3-E) PIPELINE REPLACEMENT PROJECT,
LICKING TOWNSHIP, LICKING COUNTY, OHIO

APPENDIX A

Appendix A: Licking Trails Map of Project



Case No. 17-1476-GA-BNR
LICKIGN TRAILS (LINE 3-E) PIPELINE REPLACEMENT PROJECT,
LICKING TOWNSHIP, LICKING COUNTY, OHIO

APPENDIX B



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Toll Free: 1-888-775-EMHT

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2017-0367

**Cultural Resources Literature Review for the Licking
Trails Road 10" Gas Line Replacement in Licking
Township, Licking County, Ohio**

April 19, 2017

Engineers

Surveyors

Planners

Scientists

**Cultural Resources Literature Review for the Licking
Trails Road 10" Gas Line Replacement in Licking
Township, Licking County, Ohio**

By:

Elaine Meyer-Landis

Prepared For:

**Energy Cooperative
1500 Granville Road
PO Box 4970
Newark, Ohio 43058-4970**

Submitted By:

**Joel Brown, P.I.
EMH&T
Cultural Resources Department
5500 New Albany Road
Columbus, Ohio 43054
Phone: (614) 775-4526 Fax: (614) 775-4802**

Project #: 2017-0367

19 April 2017



EMH&T Cultural Resources Management Literature Review

Name: Licking Trails Road 10" Gas Line Replacement

County: Licking

Township: Licking

The proposed project is located near the intersection of Interstate 70 (I-70) and Licking Trails Road. According to August 2016 parcel data provided through the Licking County Auditor, the proposed pipeline replacement project is comprised of zoned agricultural land and state-owned roadway right-of-way associated with I-70. Approximately 1,240 ft. of the pipeline replacement project is located within an actively managed agricultural field. The remainder of the pipeline corridor will be bored beneath I-70. Minor amounts of wooded/scrub-shrub habitat is located along the southern right-of-way limits of I-70.

Archaeological Atlas of Ohio (William C. Mills 1914)

In the early part of the past century the director of the Ohio Archaeological and Historical Society, William C. Mills, produced a generalized map of mound and site locations at the county level through personal inspection and correspondence. Examination of William C. Mills' *Archaeological Atlas of Ohio* (1914) identified no documented sites within or near the project corridor (Figure 3).

Historic Atlases

The Licking Township portion of the *Wall Map of Licking County, Ohio* (O'Beirne & Boell 1854) indicates that T. Green and the D. Mentzers Heirs owned the project corridor (Figure 4). This map does not show buildings.

The Licking Township portion of the *Atlas of Licking County, Ohio* (Beers 1866) indicates that L. Crist and M. Green owned the project corridor (Figure 5). There were no houses noted within or near the project corridor.

The Licking Township portion of the *Combination Atlas Map of Licking County, Ohio* (Everts 1875) indicates that Levi Crist and the T. Green Estate owned the project corridor (Figure 6). There were no houses located within or near the project corridor.

USGS 15 Minute Topographic map

The 1909 *Thornville, Ohio Quadrangle 15 Minute Series (Topographic)* map indicates no buildings located within the project corridor, although one house is located just outside of it to the west (Figure 7).

USGS 7.5 Minute Topographic map

The USGS 1992 *Thornville, Ohio Quadrangle 7.5 Minute Series (Topographic)* map indicates no buildings located within the project corridor, although one outbuilding is located just outside of it to the west (Figure 2). It was likely associated with the house



identified on the 15 minute topographic map.

Ohio Historic Preservation Office

The literature review at the Ohio Historic Preservation Office encompassed an area of 1 km (0.6 mi) in radius surrounding the project corridor (Figure 8). The historic features identified in this radius are detailed below.

Ohio Historic Inventory Files

A search was conducted of the Ohio Historic Inventory (OHI) files to determine if any previously documented historic buildings or structures were located within the study radius. No files were located within the study radius.

Ohio Genealogical Society Cemeteries

A review of the archived Ohio Genealogical Cemeteries files stored at the OHPO was conducted. There were no cemeteries identified in the study radius.

Consensus Determination of Eligibility Files

A review of the archived Consensus Determination of Eligibility files stored at the OHPO was conducted. There were no properties identified in the study radius.

National Register of Historic Places Files

A search of the National Register of Historic Places (NRHP) files was conducted for historic properties in the study radius. There no NRHP properties or historic districts identified within the study radius.

National Historic Landmark Files

A review of the archived National Historic Landmarks files stored at the OHPO was conducted. There were no historic properties identified in the study radius.

Cultural Resources Management Reports

Review of the Cultural Resources Management (CRM) reports indicated that one Phase I CRM survey was located within the study radius. It does not overlap with the project corridor.

Aument, Bruce W., William Hunter, Erica Kuhns, and Kolleen R. Butterworth
1993 *A Cultural Resource Survey for the Proposed LIC-IR-70-16.00 (PID 8063)*
Interchange Improvements at SR 13 in Licking Township, Licking County, Ohio.

Ohio Archaeological Inventory Files

A search was conducted of the Ohio Archaeological Inventory (OAI) files to determine if



any previously documented archaeological sites were located within the study radius. Five archaeological sites were identified (33-LI-[357 & 603-606]).

All of the sites are prehistoric. Two of the sites (33-LI-[357 & 603]) were able to be correlated with the Late Archaic time period, while the rest were temporally undefined. One site (33-LI-605) was an isolated find spot, two sites (33-LI-[604 & 606]) were small, low density lithic scatters with nineteen and seven artifacts, respectively, and one site (33-LI-603) is a small, high density lithic scatter with 102 artifacts.

Archaeological site 33-LI-357 is located approximately 200 ft. north of the project corridor and 400 ft. northeast of the northern project terminus. It was recorded on a preliminary documentation form which provided minimal information since it was not professionally surveyed. It indicated that the site contained "numerous" Brewerton projectile points within a 1-5 ac. area.

Conclusion

The information gathered from the literature review indicates that the project corridor has never undergone a CRM survey and contains no known archaeological sites, OHI files, NRHP properties, or other recorded cultural resources. Only five prehistoric archaeological sites were located within the 1 km study radius. The centerpoint for one site (33-LI-357) was recorded approximately 400 ft. northeast from the northern terminus of the project corridor. Since it was not professionally surveyed, the site form lacked detailed information pertinent to understanding its true size and nature. However, it does not likely extend into the undisturbed part of the project corridor since the landform on which the site is situated is located primarily along the north side of I-70.

The project is located approximately 1,200 ft. away from a tributary of Dutch Fork. Based on the USDA Natural Resources Conservation Service soil survey (websoilsurvey.nrcs.usda.gov; Figure 9), the majority of the project is composed of very poorly and somewhat poorly drained soils (Bennington silt loam [BeB], Pewamo silty clay loam [Pe], and Luray silty clay loam [Lu]), while a small portion is composed of moderately well drained soils (Centerburg silt loam [Cen1B1]). Review of aerial photographs (www.historicaerials.com) indicated that the property has been made up of agricultural fields throughout the years. The only previous soil disturbances noted were at the northern end by the construction of I-70. As a result, the soils are expected to be largely intact except for plowing. Based on this information, there is a moderate possibility for the project to contain prehistoric archaeological sites. However, because of the limited area of well drained soils and the constraints of the project corridor, there is a very small possibility that they would be significant sites.

One historic house with one outbuilding were identified near the project corridor during research of historic atlases and maps. The historic house was built sometime between 1875 and 1909. The outbuilding did not show up until the 7.5 minute topographic map since outbuildings, in general, were not recorded on the earlier atlases or the 15 minute topographic map. As a result, its construction date is uncertain. Based on this, it is possible for the project to contain portions of a historic era archaeological site related to trash



disposal from the house, although this type of site is not typically worthy of further study due to its age.

There were no OHI files, NRHP or DOE properties, or OGS Cemeteries located in the vicinity of the project corridor. There are no known historic properties located within the area of potential effects of the project corridor.

Bibliography

Beers, F. W.

1866 *Atlas of Licking County, Ohio*. Beers, Soule and Co., New York, NY.

Everts, L. H.

1875 *Combination Atlas Map of Licking County, Ohio*. L. H. Everts Company
Philadelphia, PA.

Mills, W. C.

1914 *Archaeological Atlas of Ohio*. Ohio State Archaeological and Historical Society,
Columbus, OH.

O'Beirne and Boyle

1854 *Map of Licking County, Ohio*. O'Beirne and Boyle, Jersey City, NJ.



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19 April 2017

Figures

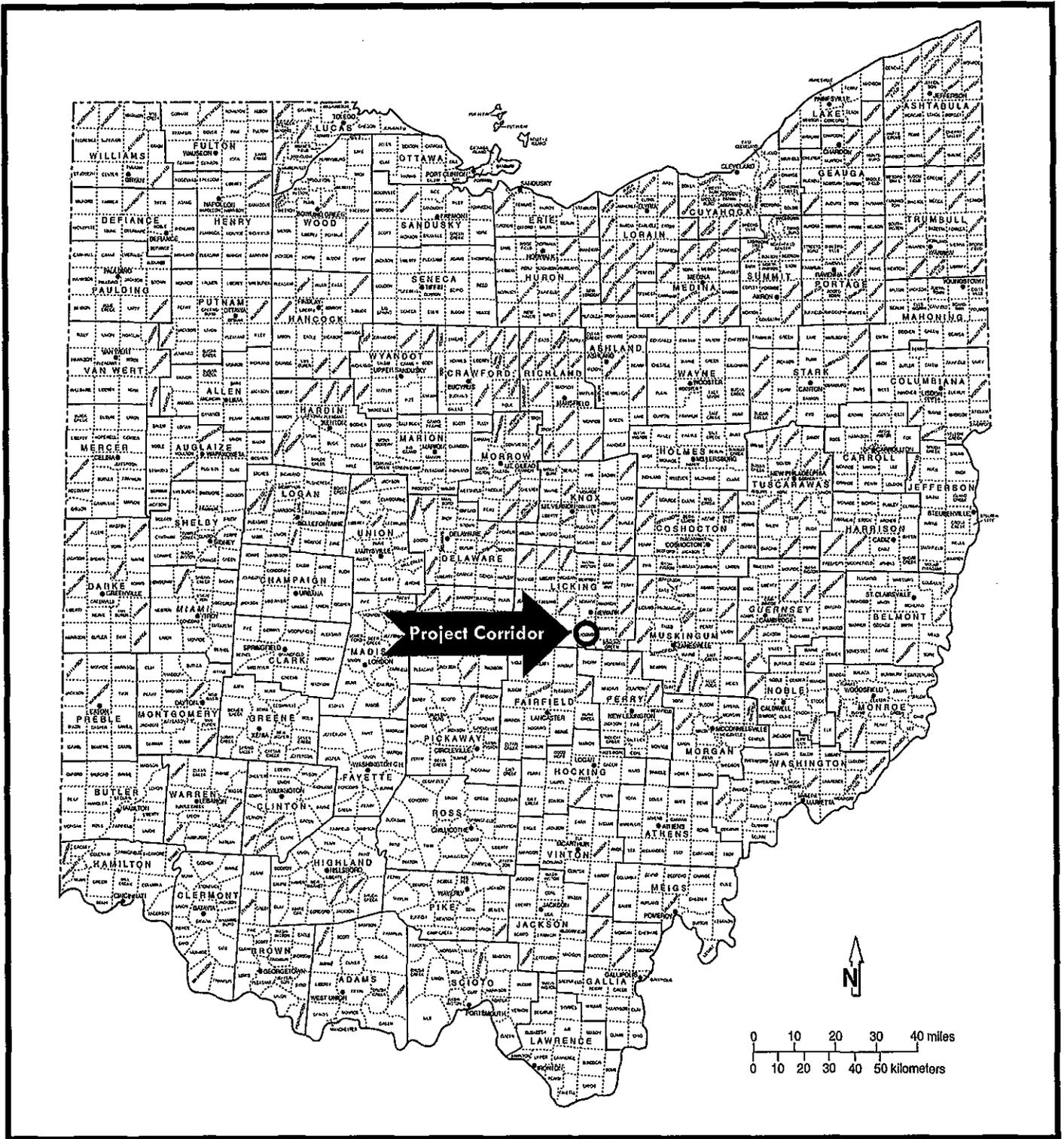


Figure 1. Political map of Ohio showing the approximate location of the project corridor.

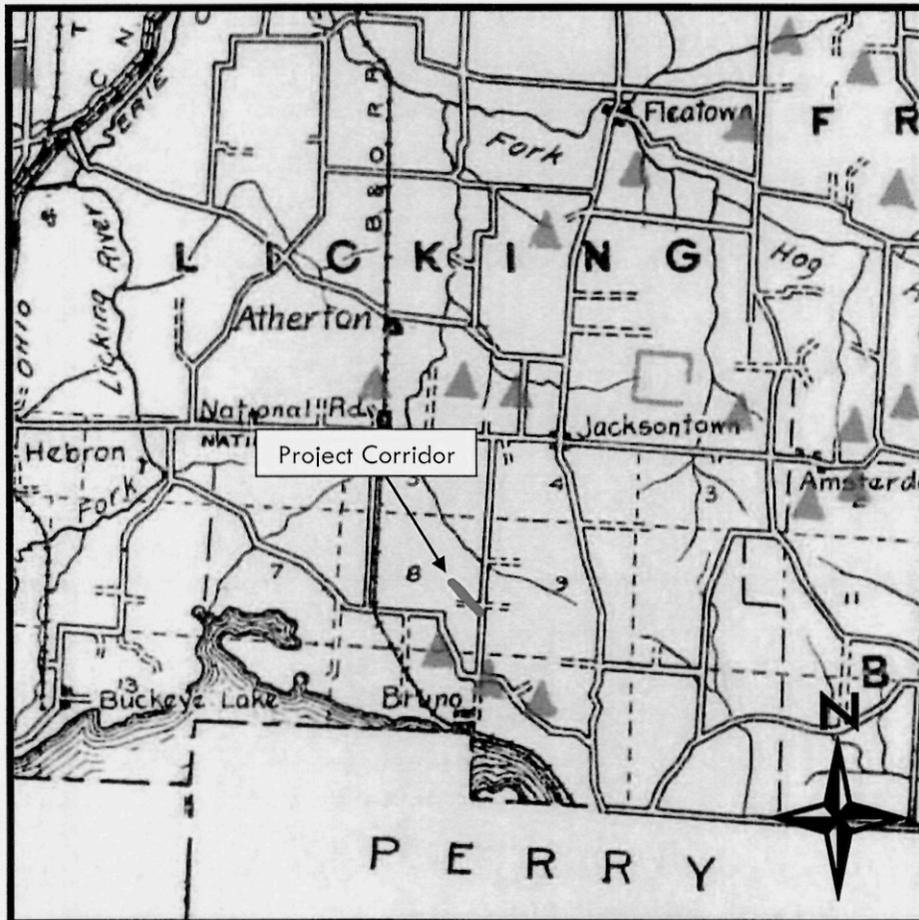


Figure 3. Licking County portion of the *Archaeological Atlas of Ohio* (Mills 1914) showing the approximate location of the project corridor.

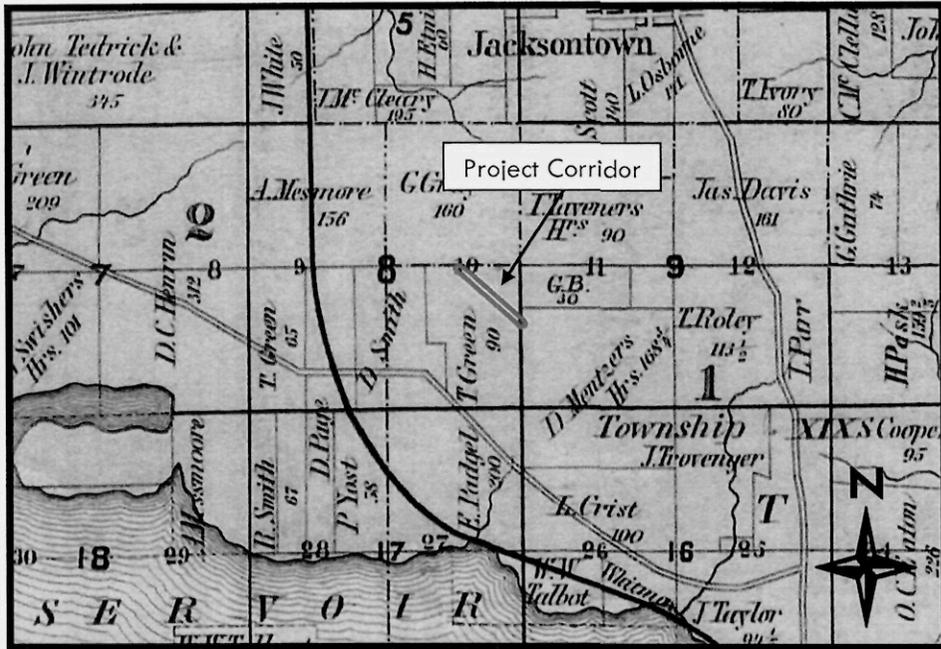


Figure 4. Licking Township portion of the Wall Map of Licking County, Ohio (O'Beirne & Boell 1854) showing the approximate location of the project corridor.

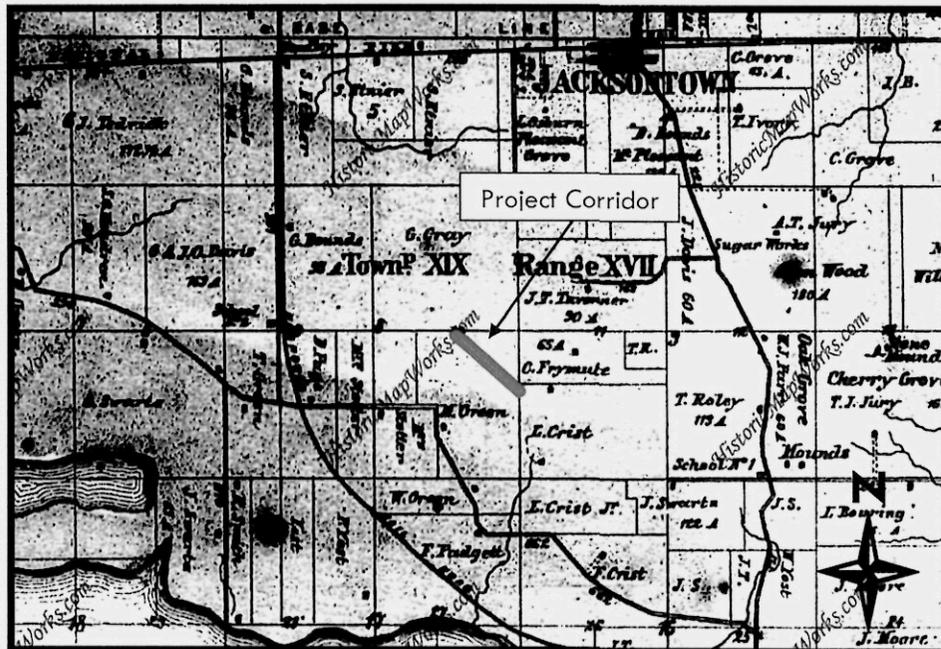


Figure 5. Licking Township portion of the Atlas of Licking County, Ohio (Beers 1866) showing the approximate location of the project corridor.

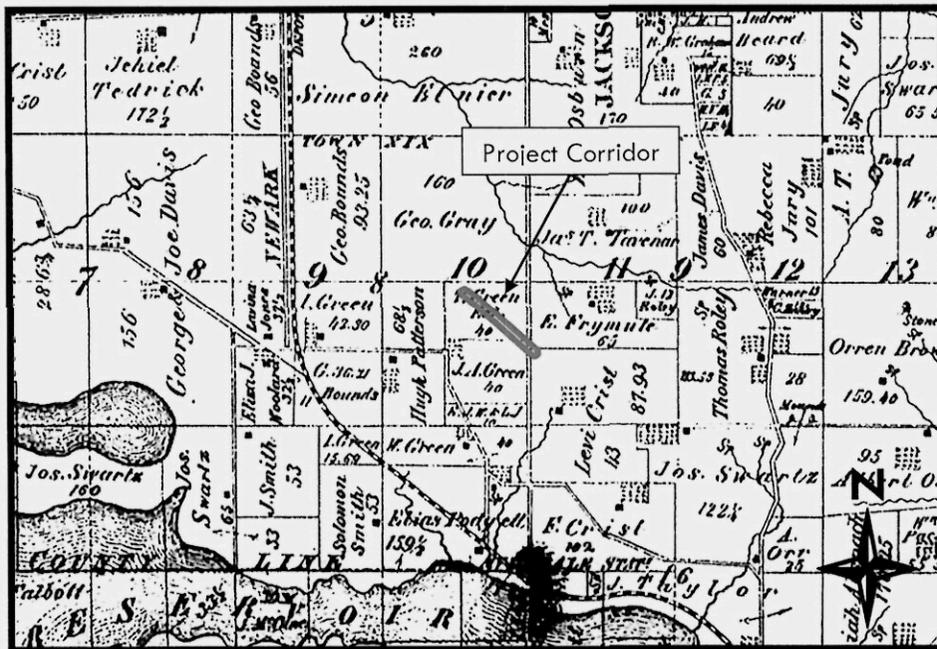


Figure 6. Licking Township portion of the Combination Atlas Map of Licking County, Ohio (Everts 1875) showing the approximate location of the project corridor.

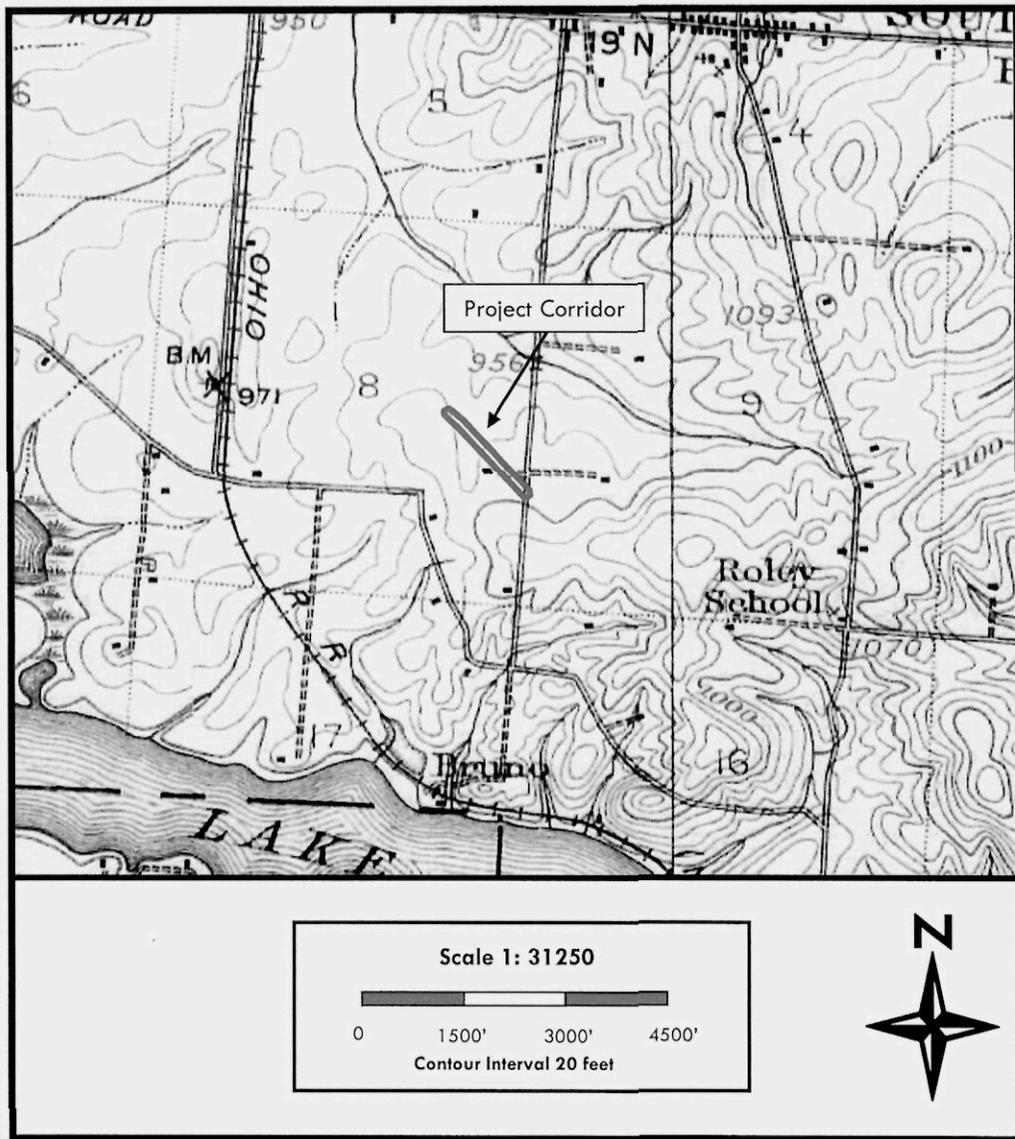
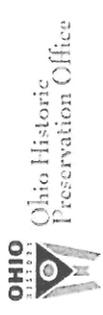
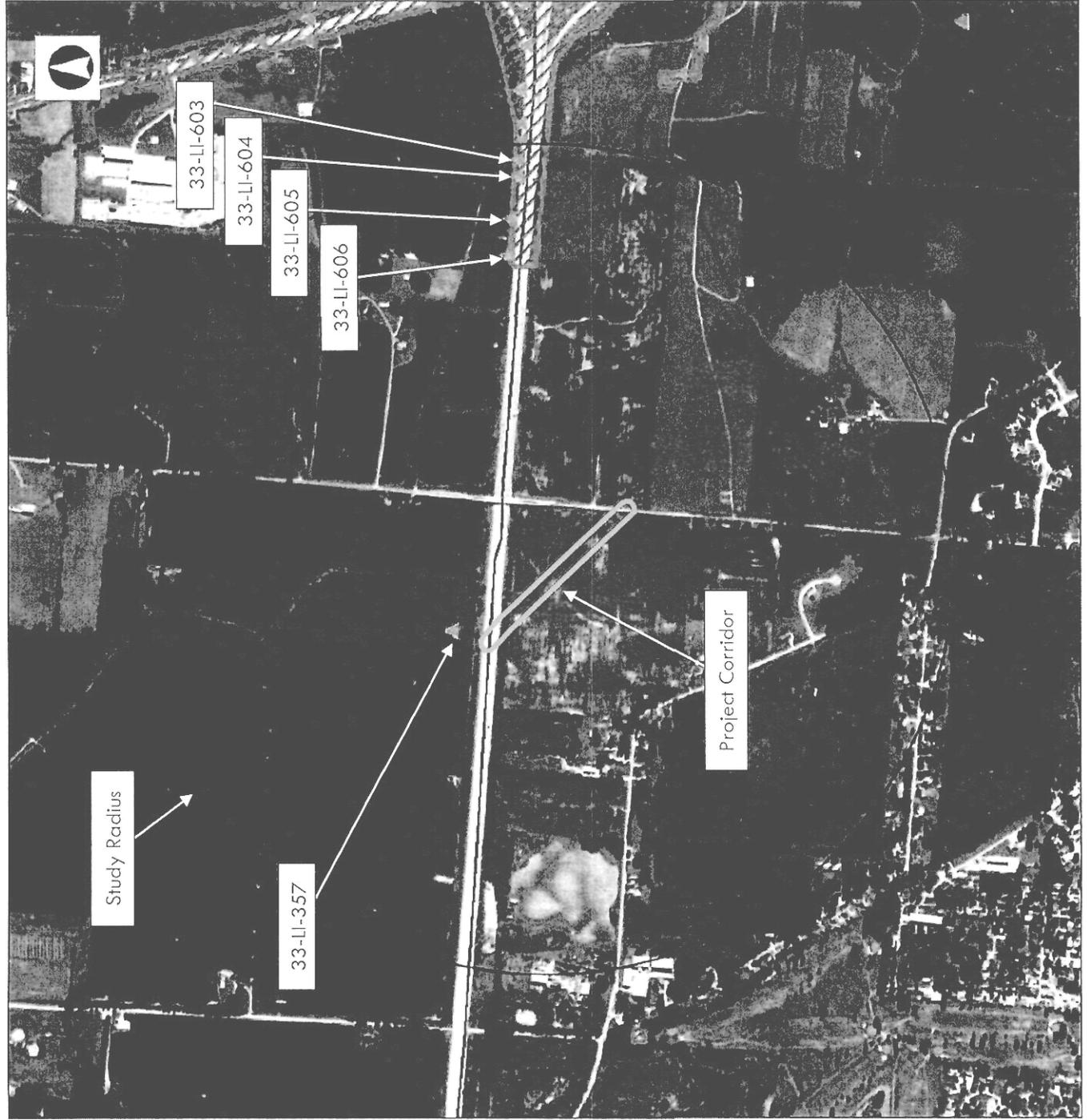
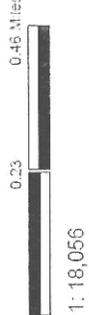


Figure 7. Portion of the USGS 1909 Thornville, Ohio Quadrangle 15 Minute Series (Topographic) map showing the approximate location of the project corridor.



Legend

- NR Listings
 - Listed
 - National Historic Landmark
 - Delisted
- NR Determinations of Eligibility
- Archaeological Sites
- Historic Structures
- Historic Bridges
- Historic Tax Credit Projects
- OGS Cemeteries
 - Confident
 - Not Confident
- Dams
- UTM Zone Split
- NR Boundaries
- OAI Site Boundaries
- Phase 1
- Phase 2



Copyright/Disclaimer

This map is a user generated static output from an internet mapping site and is for general informational use only. Data layers that appear on this map may not be current. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Datum: [Datum]
 Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere

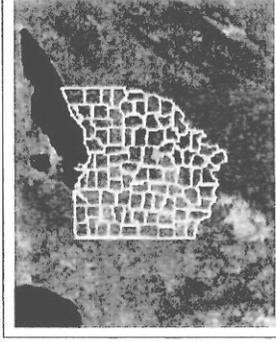


Figure 8. OHPO GIS map showing the location of the project corridor, cultural resources, and surveys within the study radius.



Figure 9. USDA Natural Resources Conservation Service soil survey map showing the location of the soil types within the project corridor.

Case No. 17-1476-GA-BNR
LICKIGN TRAILS (LINE 3-E) PIPELINE REPLACEMENT PROJECT,
LICKING TOWNSHIP, LICKING COUNTY, OHIO

APPENDIX C



Engineers, Surveyors, Planners, Scientists

MEMO

Date: May 9, 2017
To: Lija Kaleps-Clark (The Energy Cooperative)
From: Michael Krokono (EMH&T)
Subject: Licking Trails 10" Gas Line Replacement Project; Licking Township, Licking County, Ohio
Threatened & Endangered Species Review

Overview

EMH&T has completed a literature review and field review for threatened and endangered (T&E) species in coordination with the proposed natural gas pipeline replacement project located near the intersection of Interstate 70 (I-70) and Licking Trails Road in Licking Township, Licking County, Ohio (see Exhibits 1 and 2). The following summarizes Threatened & Endangered (T&E) Species coordination efforts completed with the United States Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR). Also included is a summary of field observations noted by EMH&T during our April 2017 field visit.

U.S. Fish and Wildlife Coordination

Coordination with the United States Fish and Wildlife (USFWS) was initiated on April 10, 2017 to gather information regarding federal wilderness areas, wildlife refuges or designated critical habitat, and federally-listed species within vicinity of the project area. Early coordination efforts included a review of the most recent (January 2017) list of endangered and threatened species in Licking County, Ohio. According to the USFWS, the following three (3) species are indicated for Licking County: *Myotis sodalis* (Indiana bat) – endangered, *Myotis septentrionalis* (northern long-eared bat) – threatened, and *Sistrurus catenatus* (Eastern massasauga) – threatened. Additionally, the bald eagle is protected under the Bald and Golden Eagle Protection Act. In April 2017, a representative from EMH&T reviewed the project corridor for suitable habitat for federally-listed species to be located within Licking County, Ohio. This width of the study area included a 60 foot corridor located within the existing NGO Transmission, Inc. easement located between Licking Trails Road and the project's terminus located immediately north of I-70.

According to correspondence received from the USFWS on April 14, 2017, there are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The USFWS recommended that if impacts to trees ≥ 3 inches dbh are unavoidable, all tree clearing activities occur between October 1st and March 31st. Given the above information, the USFWS concluded that due to the project type, size, and location, adverse effects to federally endangered, threatened, proposed, or candidate species are not anticipated as a result of the proposed project. A copy of the USFWS coordination request letter and correspondence received from the USFWS is included in Attachment A.

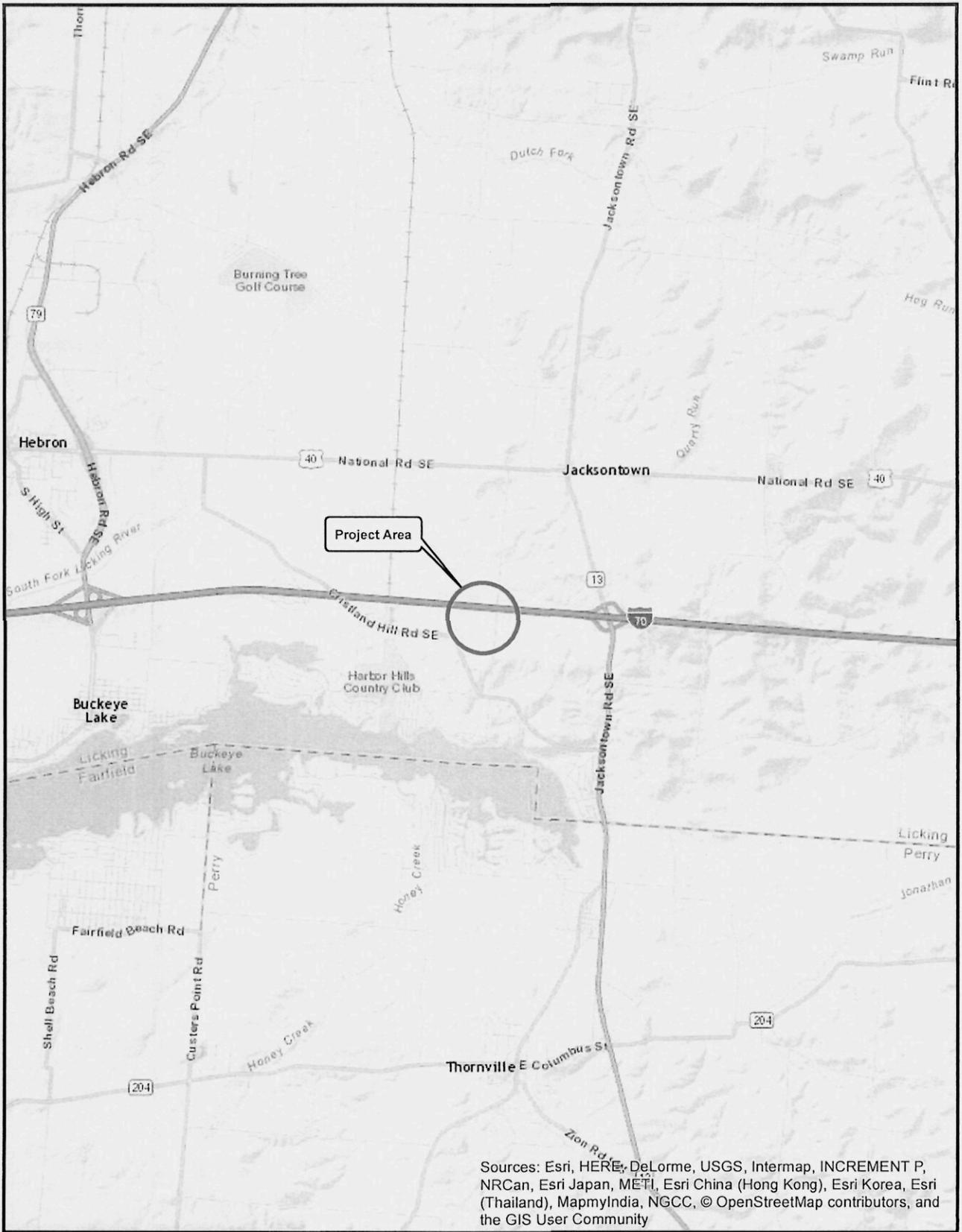
Ohio Department of Natural Resources Coordination

Coordination with the Ohio Department of Natural Resources (ODNR) Division of Wildlife (DOW) was initiated on April 10, 2017. In correspondence dated April 17, 2017, in a review of the Natural Heritage Database, the ODNR has no records for any rare or endangered species or other significant features within the project area or a one-mile radius. It was noted that Buckeye Lake State Park is located to the south, within a one-mile radius of the project area. The DOW does not have any records of an Indiana Bat capture location within a five (5) mile radius of the project area or hibernacula within a ten (10) mile radius of the project site. The DOW has insufficient data concerning the northern long-eared bat to respond to the request for information concerning that species. The nearest bald eagle nest is approximately four (4) miles to the west-southwest of the project area. A copy of the ODNR coordination request letter and correspondence received from ODNR is included in Attachment A.

Field Review

EMH&T conducted a field review of the proposed pipeline alignment in April 2017. Per this review, the predominant land use within the project is active agriculture in the form of row crops. A portion of the alignment also traverses existing State-owned right-of-way associated with I-70. Given that the project is located within range of the Indiana bat, northern long-eared bat, and Eastern massasauga, special attention was paid to critical habitats associated with these species. Aside from minimal wooded/scrub-shrub habitat located along the southern I-70 right-of-way line, the corridor is absent of unique ecological sites and/or high quality habitat. Given our observations, and the agency determinations outlined above, it is EMH&T's opinion that construction of the proposed undertaking will not adversely affect any of the previously mentioned species.

EXHIBITS



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

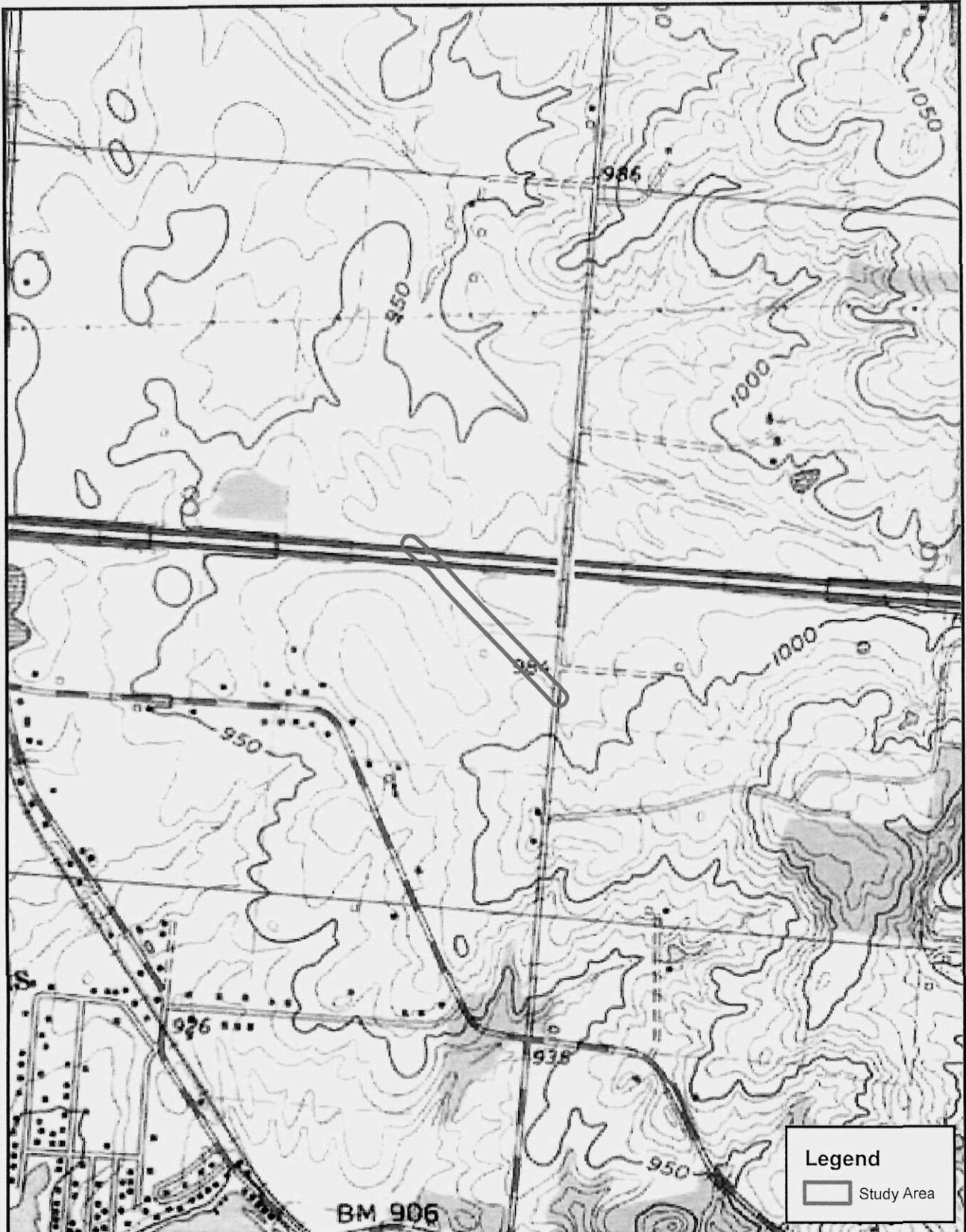
LICKING TOWNSHIP, LICKING COUNTY, OHIO

**Licking Trails 10" Gas Line Replacement
Location Map
Exhibit 1**

EMH&T
 Engineers • Surveyors • Planners • Scientists
 5500 New Albany Road, Columbus, OH 43054
 Phone: 614.775.4500 Toll Free: 888.775.3648
 emht.com



Path: J:\20170367\GIS\Exhibit 1 - Location Map.mxd



Path: J:\20170367\GIS\Exhibit 2 - USGS.mxd

EMHT
 Engineers • Surveyors • Planners • Scientists
 5500 New Albany Road, Columbus, OH 43054
 Phone: 614.775.4500 Toll Free: 888.775.3648
 emht.com

LICKING TOWNSHIP, LICKING COUNTY, OHIO

Licking Trails 10" Gas Line Replacement
 USGS Topographic Map
 Exhibit 2



Source: USGS Thornville Quad Map (Pub. 1985)



ATTACHMENT A



April 10, 2017

Mr. Dan Everson
Field Supervisor
US Fish and Wildlife Service
4625 Morse Road, Suite 104
Columbus, OH 43230

**Subject: Threatened & Endangered Species Consultation
Licking Trails 10" Gas Line Replacement**

Dear Dan,

On behalf of The Energy Cooperative (NGO Transmission, Inc.), EMH&T requests coordination regarding federally-listed species for the proposed Licking Trails 10" Gas Line Replacement project. The project proposes to replace approximately 0.30 mile of buried pipeline near the intersection of Interstate 70 (I-70) and Licking Trails Road in Licking Township, Licking County, Ohio (Exhibits 1 and 2). The approximate latitude and longitude for the center of the pipeline project is 39.943858, -82.425933. According to the United States Fish and Wildlife Service's (USFWS) Federally-Listed Species by Ohio Counties (April 2017), there are three (3) federally-listed species for Licking County, Ohio.

The Licking County list includes the following species:

- Indiana bat (*Myotis sodalis*) – Endangered
- Northern long-eared bat (*Myotis septentrionalis*) – Threatened
- Eastern massasauga (*Sistrurus catenatus*) – Threatened

Additionally, the Bald Eagle (*Haliaeetus leucocephalus*) Species of Concern is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Project Description

The existing 8-inch buried gas line runs through an active agricultural field just west of Licking Trails Road and travels for approximately 0.30 mile to the northwest, under I-70. This project proposes to replace the existing line with a 10" diameter gas line, approximately along the same alignment. The majority of the project area is comprised of actively managed agricultural land and roadway right-of-way along I-70. The information provided as a result of this coordination will be used for threatened/endangered species documentation as part of a Construction Notice to the Ohio Power Siting Board.

Potential Effects on Federally-Listed Species

Bat Species

According to Clark, et. al. (1987), Indiana bat is found in Ohio during summer months between April 1 and September 31. The USFWS focuses on important summer habitat requirements including: "1) dead or live trees and snags with peeling or exfoliating bark, split tree trunk

April 10, 2017

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; and 3) stream corridors, riparian areas, and upland woodlots that provide foraging sites" (USFWS, 2012). The bats will use many tree species provided the tree has the necessary habitat characteristics. According to the USFWS, the northern long-eared bat will roost underneath exfoliating bark, in cavities, or in crevices of both dead and live trees during summer months (USFWS, 2013). They will form maternity colonies in similar habitat and occasionally roost in man-made structures like barns and sheds (ODNR, 2013). Both species migrate to caves located in karst regions during the winter. Foraging sites for both species are similar (USFWS, 2013).

A limited amount of tree clearing along I-70 may be required to complete the project. If clearing is required, seasonal clearing between October 1st and March 31st is proposed for this project in order to minimize any potential impacts to the Indiana bat and northern long-eared bat. Based on the amount, timing, and quality of trees to be cleared within the alignment, it is our opinion that the proposed project **will not likely adversely affect** either bat species.

Eastern Massasauga

According to the U.S. Fish and Wildlife Service, "massasaugas live in wet areas including wet prairies, marshes and low areas along rivers and lakes. In many areas massasaugas also use adjacent uplands during part of the year. They often hibernate in crayfish burrows but may also be found under logs and tree roots or in small mammal burrows." The proposed corridor and surrounding area is almost entirely comprised of active agricultural fields. Large wet prairies and marshes connected to non-agricultural uplands are absent from the proposed corridor and surrounding areas. Due to the high intensity of the surrounding land use, feeding and hibernating sites are extremely unlikely within or adjacent to the project corridor. Therefore, it is EMH&T's opinion that the proposed project **is not likely to adversely affect** the eastern massasauga.

Bald Eagle

The bald eagle has been listed as a species of concern and is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. According to the USFWS, the bald eagle prefers open bodies of water with an abundance of fish and requires old growth and mature stands of trees for roosting and nesting. The project corridor does not contain super canopy trees suitable for nesting. As such, it is our opinion that the proposed project **is not likely to adversely affect** the bald eagle.

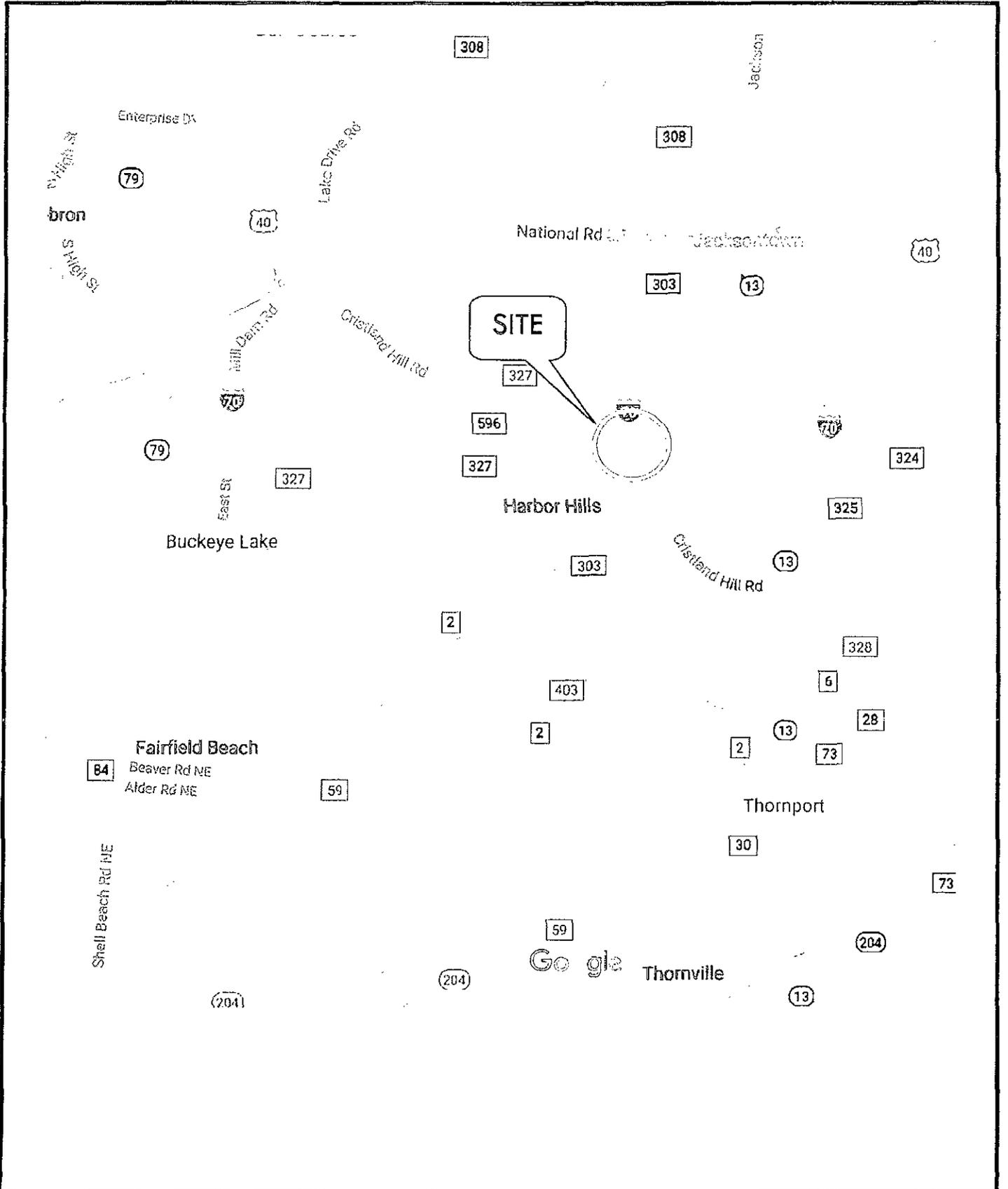
Summary

Due to the above-mentioned rationale, it is our opinion the project **is not likely to adversely affect** any federally-listed species. We request your concurrence with our determinations for the indicated species. Thank you for your assistance with this matter.

Sincerely,

Stephen Bailey
Environmental Scientist
Attachments: 2

Exhibits



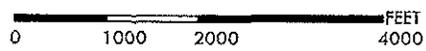
EMHT

Evans, Mechwart, Hamblen & Tilton, Inc.
 Engineers • Surveyors • Planners • Scientists
 3300 New Albany Road, Columbus, OH 43054
 Phone: 614.775.4500 Fax: 614.775.4800

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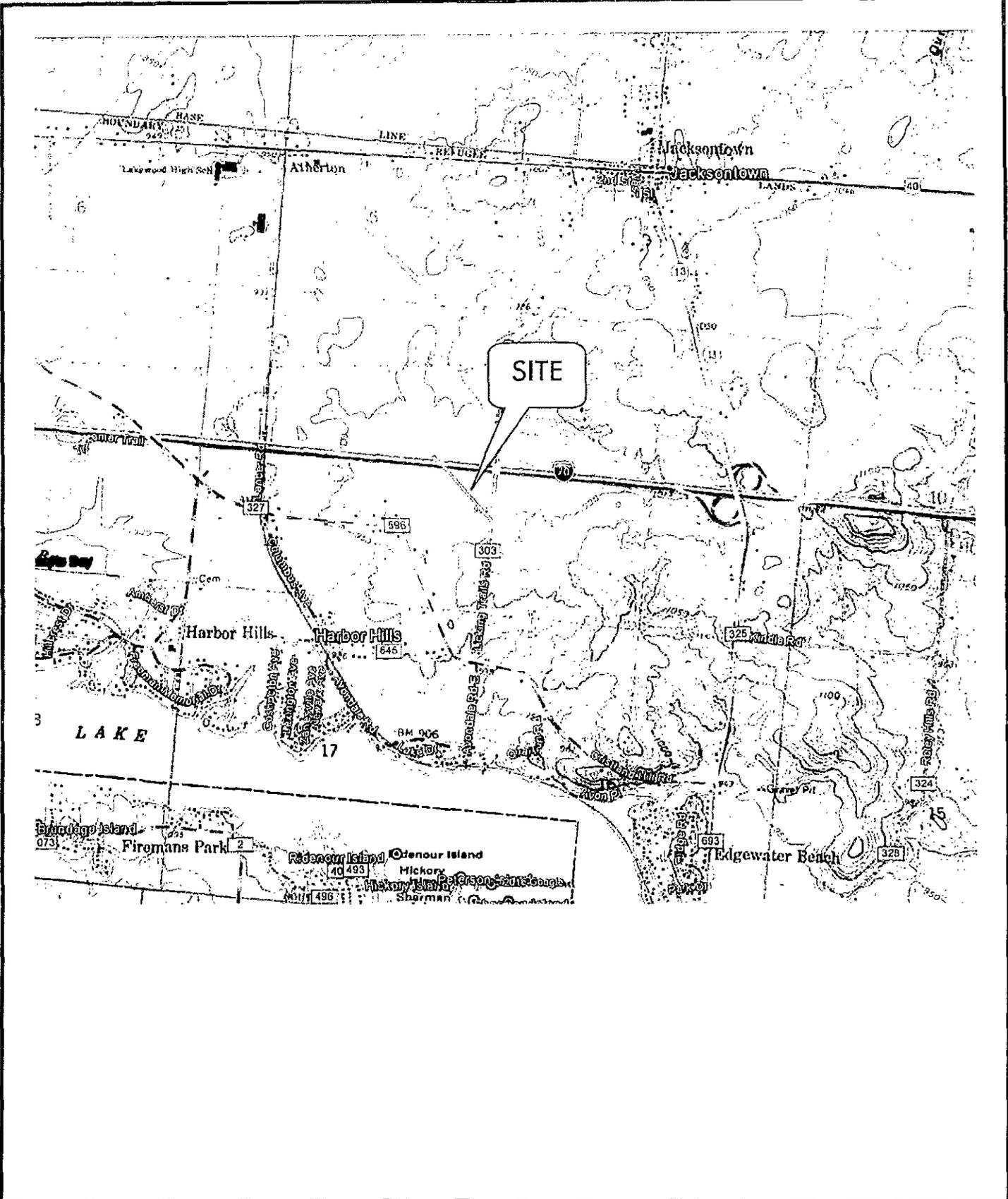
SCALE: 1" = 2000'



LICKING TOWNSHIP, LICKING COUNTY, OHIO
**LICKING TRAILS 10" GAS LINE REPLACEMENT
 AREA LOCATION MAP**

Exhibit 1

Source:
 - Google Maps



EMHT
 Evans, Mehlwerl, Hamilton & Tilton, Inc.
 Engineers • Surveyors • Planners • Scientists
 5500 New Albany Road, Columbus, OH 43244
 Phone: 614.775.4500 Fax: 614.775.1900

Not to Scale

LICKING TOWNSHIP, LICKING COUNTY, OHIO
LICKING TRAILS 10" GAS LINE REPLACEMENT
USGS TOPOGRAPHIC MAP

Exhibit 2

Source: Google Earth

M C M X X V I

Krokonko, Michael

Subject: FW: NGO Transmission Onc., Licking Trails 10" Gas Line Replacement, Licking Co.

From: susan_zimmermann@fws.gov [mailto:susan_zimmermann@fws.gov] On Behalf Of Ohio, FW3

Sent: Friday, April 14, 2017 9:10 AM

To: Bailey, Stephen <sbailey@emht.com>

Cc: nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us

Subject: NGO Transmission Onc., Licking Trails 10" Gas Line Replacement, Licking Co.



UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994



TAILS# 03E15000-2017-TA-1104

Dear Mr. Bailey,

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

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

FEDERALLY LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the federally endangered **Indiana bat** (*Myotis sodalis*) and the federally threatened **northern long-eared bat** (*Myotis septentrionalis*). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches diameter at breast height (dbh)

that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves and abandoned mines.

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

If implementation of this seasonal tree cutting recommendation is not possible, summer surveys may be conducted to document the presence or probable absence of Indiana bats within the project area during the summer. If a summer survey documents probable absence of Indiana bats, the 4(d) rule for the northern long-eared bat could be applied. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Endangered Species Coordinator for this office. Surveyors must have a valid federal permit. Please note that summer surveys may only be conducted between June 1 and August 15.

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

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

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Everson". The signature is fluid and cursive, with the first name "Dan" being more prominent.

Dan Everson

Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW

Kate Parsons, ODNR-DOW



Engineers, Surveyors, Planners, Scientists

April 10, 2017

ODNR Division of Wildlife
Ohio Natural Heritage Program
2045 Morse Rd., Bldg. G-3
Columbus, Ohio 43229-6693

Attn: Debbie Woischke

**Subject: Ohio Biodiversity Database Search Request –
Licking Trails 10" Gas Line Replacement**

Dear Debbie,

Enclosed please find a data request form for an Ohio Biodiversity Database search. The purpose of the requested search is to gather information regarding the potential presence of any state and/or federal-listed species or features which may be present within or nearby a site located in Licking Township, Licking County, Ohio. The information provided will be used as part of a Construction Notice to the Ohio Power Siting Board.

Attached is the data request form and a copy of the USGS *Thornville, Ohio* quadrangle map showing the location of the site. Please feel free to give me a call at (614) 775-4522 or email me at sbailey@emht.com if you have any questions regarding the site or if you require additional information. Thank you for your assistance in this matter.

Sincerely,

A handwritten signature in black ink that reads "Stephen Bailey". The signature is written in a cursive style with a large, stylized 'S' and 'B'.

Stephen Bailey
Environmental Scientist

Enclosures: 2



NATURAL HERITAGE DATA REQUEST FORM

ODNR Division of Wildlife
Ohio Natural Heritage Program
2045 Morse Rd., Bldg. G-3
Columbus, OH 43229-6693
Phone: 614-265-6818
Email: obdrequest@dnr.state.oh.us

INSTRUCTIONS:

Please complete all the information on both sides of this form, sign (required) and email it to the address given above. Please provide a description of the work to be performed at the project site, and a map detailing your project site boundaries. If you have GIS capabilities or request a GIS response, please also submit a shapefile of your project site (unbuffered). Data requests will be completed within approximately 30 days, usually sooner. There is currently no charge to process requests.

WHAT WE PROVIDE:

As applicable to your project, the Ohio Natural Heritage Database (ONHD) will provide records for state and federally listed plants and animals, high quality plant communities, geologic features, breeding animal concentrations, scenic rivers, protected natural areas (managed areas), and significant unprotected natural areas (conservation sites). A one mile radius around the project site will automatically be searched. Because the ONHD contains sensitive information, it is our policy to provide only the data needed to complete your project.

Please note that this information is provided without comment on potential impacts to the species and their habitats, and therefore does not constitute coordination with ODNR under NEPA, the Fish & Wildlife Coordination Act, the Federal Water Pollution Control Act and other laws. If your project requires ODNR coordination, please submit it for a more extensive environmental review to environmentalreviewrequest@dnr.state.oh.us. Additional information on the environmental review process is available at <http://realestate.ohiodnr.gov/environmental-review>. If you have questions, please contact John Kessler at 614-265-6621 or john.kessler@dnr.state.oh.us. A ONHD search is included as part of the environmental review process.

Date: 4/10/2017 Company name: EMH&T

Name of person response letter should be addressed to:

Mr. Ms. Stephen Bailey

Address: 5500 New Albany Road

City/State/Zip: Columbus/ Ohio/ 43054

Phone: 614-775-4522

E-mail address: sbailey@emht.com

Project Name: Licking Trails 10" Gas Line Replacement

Project Site Address: Near intersection of I-70 and Licking Trails Road

Project County: Licking

Project City or Township: Licking Township

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

Thornville

Project latitude and longitude: 39.94373, -82.42578

Description of work to be performed at the project site: _____

Replacement of buried pipeline

How do you want your data reported? (Both formats provide the same data. The manual search is most appropriate for small scale projects or for those without GIS capabilities. With this option we will send you a list of records and a map showing their location. If you request a GIS shapefile, we will send you a shapefile of data layers. You will then need to make your own map and list of data for your report. You must have GIS capabilities. If you choose this option, please email your project shapefile with your request. If you do not make a selection, a manual search will be performed. Please choose only one option below.)

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

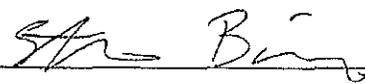
Other than the standard data (see "what we provide" at top of form), additional information you require:

- 1.) Indiana bat capture records within a 5-mile radius
- 2.) Indiana bat hibernacula locations within a 10-mile radius
- 3.) Nearest location of bald eagle nests to the project area

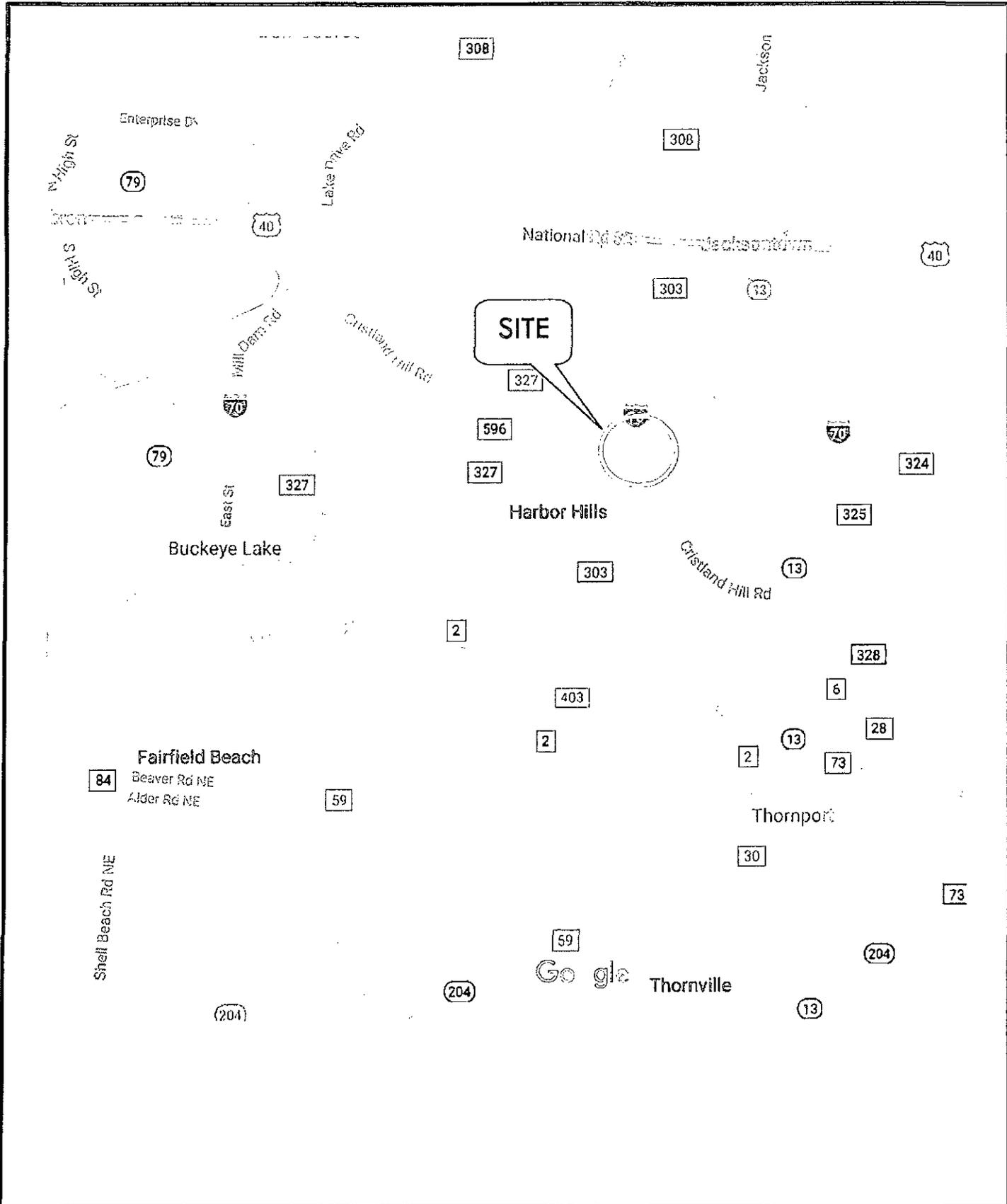
How will the information be used?

As part of threatened/endangered species search for a construction notice to the Ohio Power Siting Board

The chief of the Division of Wildlife has determined that the release of the ONHD information you have requested could be detrimental to the conservation of a species or unique natural feature. Pursuant to section 1531.04 of the Ohio Revised Code, this information is not subject to section 149.43 of the Revised Code. By signing below, you certify that the data provided will not be disclosed, published, or distributed beyond the scope of your specific project.

Signature 

Date: 4/10/2017



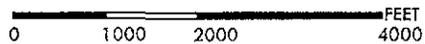
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Evans, Mechwart, Hombelton & Iron, Inc.
 Engineers • Surveyors • Planners • Scientists
 5500 New Albany Road, Columbus, OH 43054
 Phone: 614.775.4900 Fax: 614.775.4900

W C M X X V I



SCALE: 1" = 2000'



LICKING TOWNSHIP, LICKING COUNTY, OHIO
LICKING TRAILS 10" GAS LINE REPLACEMENT
AREA LOCATION MAP

Exhibit 1

Source:
 - Google Maps



SITE

Orange Island
 Firemans Park
 Odorous Island
 Hickory
 Sherman

LICKING TOWNSHIP, LICKING COUNTY, OHIO
 LICKING TRAILS 10" GAS LINE REPLACEMENT
 USGS TOPOGRAPHIC MAP
 Exhibit 2

EMHT

Evans, Mochwal, Hamilton & Etkin, Inc.
 Engineers - Surveyors - Planners - Scientists
 5507 N.W. 40th Road, Columbus, OH 43224
 Phone: 614.773.4300 Fax: 614.773.4600

Not to Scale



Source: Google Earth

M C M E K V



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Ohio Division of Wildlife
Raymond W. Petering, Chief
2045 Morse Rd., Bldg. G
Columbus, OH 43229-6693
Phone: (614) 265-6300

17 April 2017

Stephen Bailey
EMH&T
5500 New Albany Rd.
Columbus, OH 43054

Dear Mr. Bailey,

I have reviewed the Natural Heritage Database for the Licking Trails Gas Line Replacement project area, including a one mile radius, in Licking Township, Licking County, Ohio. We have no records for rare or endangered species or other significant features within the project area or a one mile radius. However, please note the location of Buckeye Lake State Park (ODNR Division of Parks & Watercraft), within a one mile radius and as shown in green on the attached map.

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. The nearest Bald Eagle (*Haliaeetus leucocephalus*) nest is approximately four miles to the west-southwest of the project area. Bald Eagle nest locations are based on survey data that was last collected in 2012. Since the Bald Eagle was removed from the state rare species list, the Natural Heritage Program will no longer be maintaining comprehensive Bald Eagle nest data going forward.

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. 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.

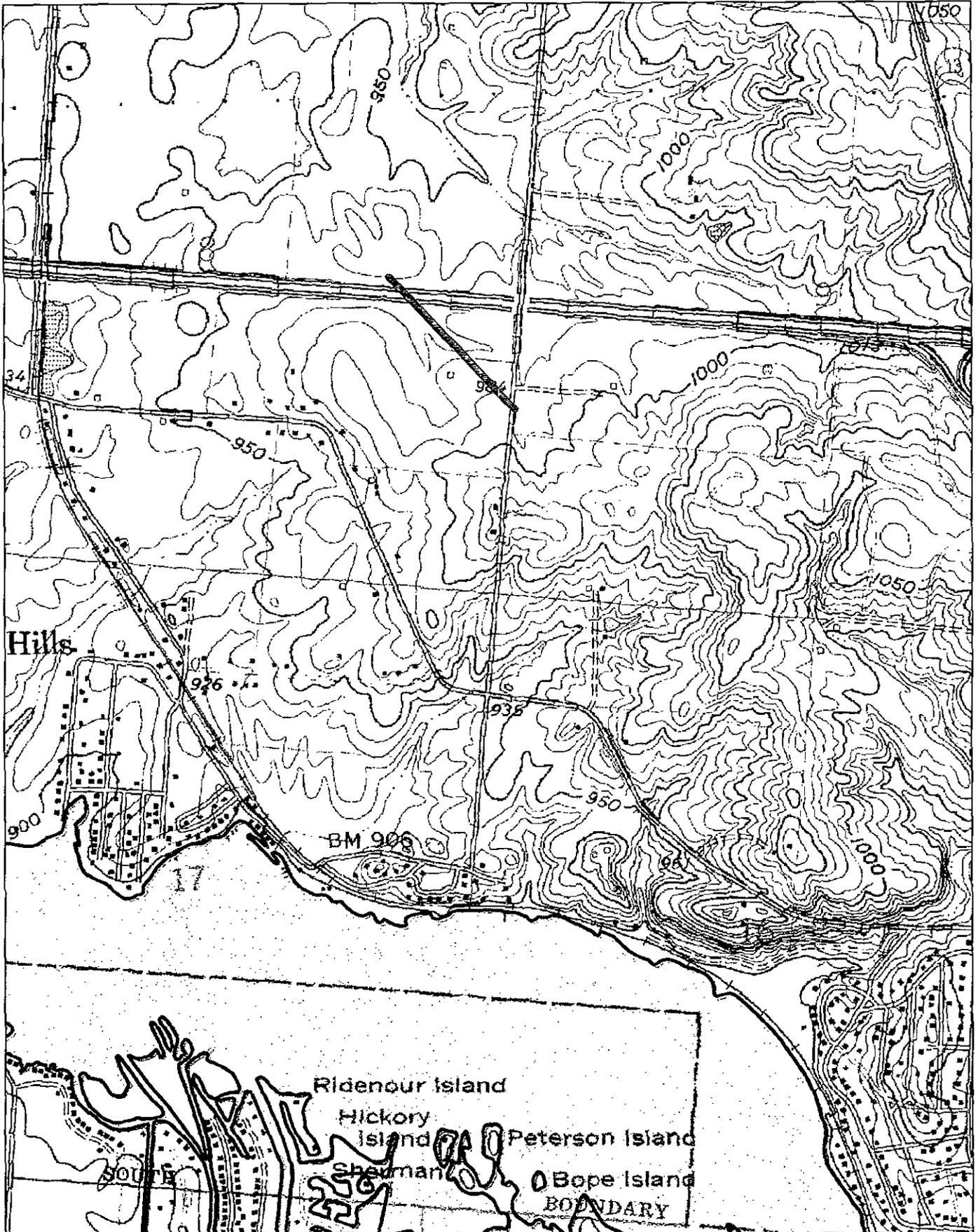
Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

A handwritten signature in cursive script that reads "Debbie Woischke".

Debbie Woischke
Ohio Natural Heritage Program

Licking Trails Gas Line Replacement Project



Case No. 17-1476-GA-BNR
LICKIGN TRAILS (LINE 3-E) PIPELINE REPLACEMENT PROJECT,
LICKING TOWNSHIP, LICKING COUNTY, OHIO

APPENDIX D



Engineers, Surveyors, Planners, Scientists

MEMO

Date: May 9, 2017
To: Lija Kaleps-Clark (The Energy Cooperative)
From: Michael Krokonko and Stephen Bailey (EMH&T)
Subject: Licking Trails 10" Gas Line Replacement Project; Licking Township, Licking County, Ohio
Waters of the U.S. Investigation

Overview

EMH&T conducted a field investigation on April 6, 2017 for waters of the U.S. within a sixty (60) foot-wide corridor associated with the Licking Trails 10" Gas Line Replacement Project. The pipeline corridor (approximately 1,560 linear feet) is located near the intersection of Interstate 70 (I-70) and Licking Trails Road in Licking Township, Licking County, Ohio. The results of the literature review and field investigation are summarized below.

Literature Review

As shown on Exhibit 1, the project is located north of Buckeye Lake near the intersection of Licking Trails Road and I-70 in Licking Township, Licking County, Ohio. The majority of the corridor is located in an actively managed agricultural field; the remainder of the corridor traverses beneath I-70.

Topographic Features

As shown on Exhibit 2, the subject corridor traverses various elevations between 990 and 960 feet (National Geodetic Vertical Datum) according to the USGS 7.5' Series *Thornville, Ohio* quadrangle (USGS, 1985). No structures, marshes, drainageways, or open water ponds were depicted within or adjacent to the corridor.

Mapped Soils

According to the USDA-Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database (2016), as shown on Exhibit 3A, the corridor contains a total of five (5) soil types. These soils are listed below in Table 1 along with their hydric status. According to the Licking County Soil Survey (USDA, 1992) (Exhibit 3B), two (2) intermittent drainageways are located within the pipeline corridor. No additional drainageways, open water features, marsh symbols, or wet spots are mapped within or adjacent to the site.

TABLE 1
Mapped On-site Soils

Mapped Soil Unit	Map Unit Symbol	Hydric Status	Hydric Inclusions	Location of Hydric Inclusions
Bennington silt loam, 0 to 2 percent slopes	BeA	Partially hydric	Pewamo (3%)	Depressions
Bennington silt loam, 2 to 6 percent slopes	BeB	Partially hydric	Pewamo (3%)	Depressions
Centerburg silt loam, 2 to 6 percent slopes	Cen1B1	Non-hydric	-	-
Luray silty clay loam	Lu	Hydric	-	-
Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes	Pe	Hydric	-	-

Hydrologic Conditions

A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (USDA, NRCS, 2010). Map units are composed of one or more map unit components or soil types, each of which is rated as hydric or not hydric soil. Map units that are made up dominantly of hydric soils may have small areas of minor non-hydric components in the higher positions on the landform, and map units that are made up dominantly of non-hydric soils may have small areas of minor hydric components in the lower positions on the landform.

According to the USDA, the Centerburg silt loam is a non-hydric soil, the Bennington silt loams are partially hydric soils, and the Luray silty clay loam and Pewamo silty clay loam are hydric soils. "Non-hydric" means that all components are rated as not hydric. "Hydric" means that the major components of the soil are rated as hydric. "Partially hydric" means that at least one major component of the map unit is rated as hydric, and at least one major component is rated as not hydric. Hydric inclusions within these soil units may be found in depressions (USDA, NRCS, 2012a).

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) was reviewed for the site (FEMA, 2007). The entire project area lies within Zone X (unshaded), which is an area determined to be outside the 0.2% annual chance floodplain. Since no floodway areas were mapped within or near the site, an exhibit was not provided. No drainageways were mapped within or adjacent to the pipeline corridor.

The United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) mapping was reviewed for the corridor using the online Wetlands Mapper portal and USFWS GIS data (USFWS, 2015). As shown on Exhibit 4, no features were identified within the pipeline corridor. However, one (1) palustrine, emergent, persistent, seasonally flooded wetland (PEM1C) is mapped adjacent to the corridor.

Field Investigation Results

EMH&T conducted a field investigation for the corridor on April 6, 2017 to determine the location, extent, and quality of potential waters of the United States, including wetlands and streams. The

corridor was largely comprised of an actively managed agricultural field (photographs 1-3). The investigation did not identify any potential wetlands, streams, or other potentially jurisdictional features within the corridor. As shown on Exhibit 5, upland data forms were taken in various locations along the corridor to further document field conditions. Immediately outside of the pipeline corridor, a stream's limit of jurisdiction was observed to start within the I-70 roadway right-of-way (photograph 7). The stream receives drainage from the agricultural field's drain tile system and drains to the north as shown on Exhibit 5.

Non-jurisdictional drainage swales were observed within the northwestern limits of the corridor. As seen in photographs 4 and 5, the swales lacked a defined bank, stream bed material, and an ordinary high water mark. The lack of stream characteristics suggest the features lack regular scouring flows as a majority of the field's runoff has historically been carried through a functioning drain tile system. The absence of an ordinary high water mark would likely categorize these features as upland drainage swales and would therefore not be considered jurisdictional waters of the U.S. in accordance with 33 CFR 328.4(c)(1).

The mapped NWI wetland, shown on Exhibit 4, was field verified to determine the location and extent of any potential jurisdictional boundaries. According to the NWI, the emergent wetland was mapped at the start of a drainage swale within the actively managed agricultural field. Photograph 6 provides evidence that the entire area within and around the mapped NWI feature was recently under successful row crop production. Field observations confirmed the area lacked any evidence of hydrophytic vegetation as the area was dominated by last year's agricultural crop (corn). Historic Google Earth aerial photographs reveal the agricultural field has been actively managed and no wet signatures are observed in any recent aerial photographs. The lack of wetland hydrology in the area has allowed the successful plowing, planting, harvesting of agricultural products on an annual basis. This indicates that the area likely lacks flooded or ponded conditions for more than 14 consecutive days during the growing season, which would otherwise prohibit the successful production of traditional agricultural crops. The lack of wetland hydrology and vegetation in the area would therefore would not meet the definition of a wetland and would likely not be considered a water of the U.S.

Conclusion

EMH&T conducted a field investigation of the corridor on April 6, 2017 to determine the location, extent, and quality of potential waters of the United States, including wetlands and streams. The investigation did not identify any potential wetlands, streams, or other potentially jurisdictional features within the corridor. As shown on Exhibit 5, upland data forms were taken in various locations to further document field conditions. It is EMH&T's opinion that construction of the proposed pipeline will not result in impacts to a wetland, stream, or other jurisdictional feature.

USACE DATA FORMS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Licking Trails 10" Gas Line Replacement City/County: Licking Twp/ Licking Co. Sampling Date: 4/6/2017

Applicant/Owner: The Energy Cooperative State: OH Sampling Point: UTP-1

Investigator(s): Stephen Bailey Section, Township, Range: S8 T19N R17W

Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): CONVEX

Slope (%): _____ Lat: 39.942762 Long: -82.424575 Datum: WGS84

Soil Map Unit Name: Centerburg silt loam, 2 to 6 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)

Are Vegetation N, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Upland test point is located within an active agricultural field. The field's drain tile network and annual plowing/planting have disturbed the expected natural conditions.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Zea mays</u>	<u>85</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Allium sp.</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3. <u>Lamium amplexicaule</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Lepidium sp.</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
_____ = Total Cover				

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

SOIL

Sampling Point: UTP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/3	100					SL	
7-20	10YR 5/6	100					SL	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed): Type: _____ Depth (inches): _____						Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>		
Remarks: 								

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction In Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: None observed		

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Licking Trails 10" Gas Line Replacement City/County: Licking Twp/ Licking Co. Sampling Date: 4/6/2017
 Applicant/Owner: The Energy Cooperative State: OH Sampling Point: UTP-2
 Investigator(s): Stephen Bailey Section, Township, Range: S8 T19N R17W
 Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 39.943891 Long: -82.425966 Datum: WGS84
 Soil Map Unit Name: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks: Upland test point is located within an active agricultural field. The field's drain tile network and annual plowing/planting have disturbed the expected natural conditions. See remarks in Hydrology section.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
5. _____	_____	_____	_____	
= Total Cover				OBL species _____ x 1 = _____
Sapling/Shrub Stratum (Plot size: _____)				FACW species _____ x 2 = _____
1. _____	_____	_____	_____	FAC species _____ x 3 = _____
2. _____	_____	_____	_____	FACU species _____ x 4 = _____
3. _____	_____	_____	_____	UPL species _____ x 5 = _____
4. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = _____
= Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5'</u> _____)				
1. <u>Zea mays</u>	<u>85</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Lamium amplexicaule</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
3. <u>Lepidium sp.</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
= Total Cover				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: UTP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/3	100						
5-8	10YR 4/2	95	7.5YR 5/6	5	C	M	SCL	
9+	10YR 4/2	80	7.5YR 5/6	20	C	M	SCL	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed):						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Type: _____ Depth (Inches): _____								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction In Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>surface</u> (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
Soils were saturated from recent rainfall (0.6 inch) the day prior. Saturated conditions likely do not persist for the duration required to meet wetland hydrology criteria due to the field's functioning drain tile system. Evidence of this is provided by successful agricultural production throughout the area		

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Licking Trails 10" Gas Line Replacement City/County: Licking Twp/ Licking Co. Sampling Date: 4/6/2017
 Applicant/Owner: The Energy Cooperative State: OH Sampling Point: UTP-3
 Investigator(s): Stephen Bailey Section, Township, Range: S8 T19N R17W
 Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): convex
 Slope (%): _____ Lat: 39.944573 Long: -82.426795 Datum: WGS84
 Soil Map Unit Name: Luray silty clay loam NWI classification: n/a

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

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks: Upland test point is located within an active agricultural field. The field's drain tile network and annual plowing/planting have disturbed the expected natural conditions. See remarks in Hydrology section.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
5. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
= Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Zea mays</u>	<u>85</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Lamium amplexicaule</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3. <u>Echinochloa sp.</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>95</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

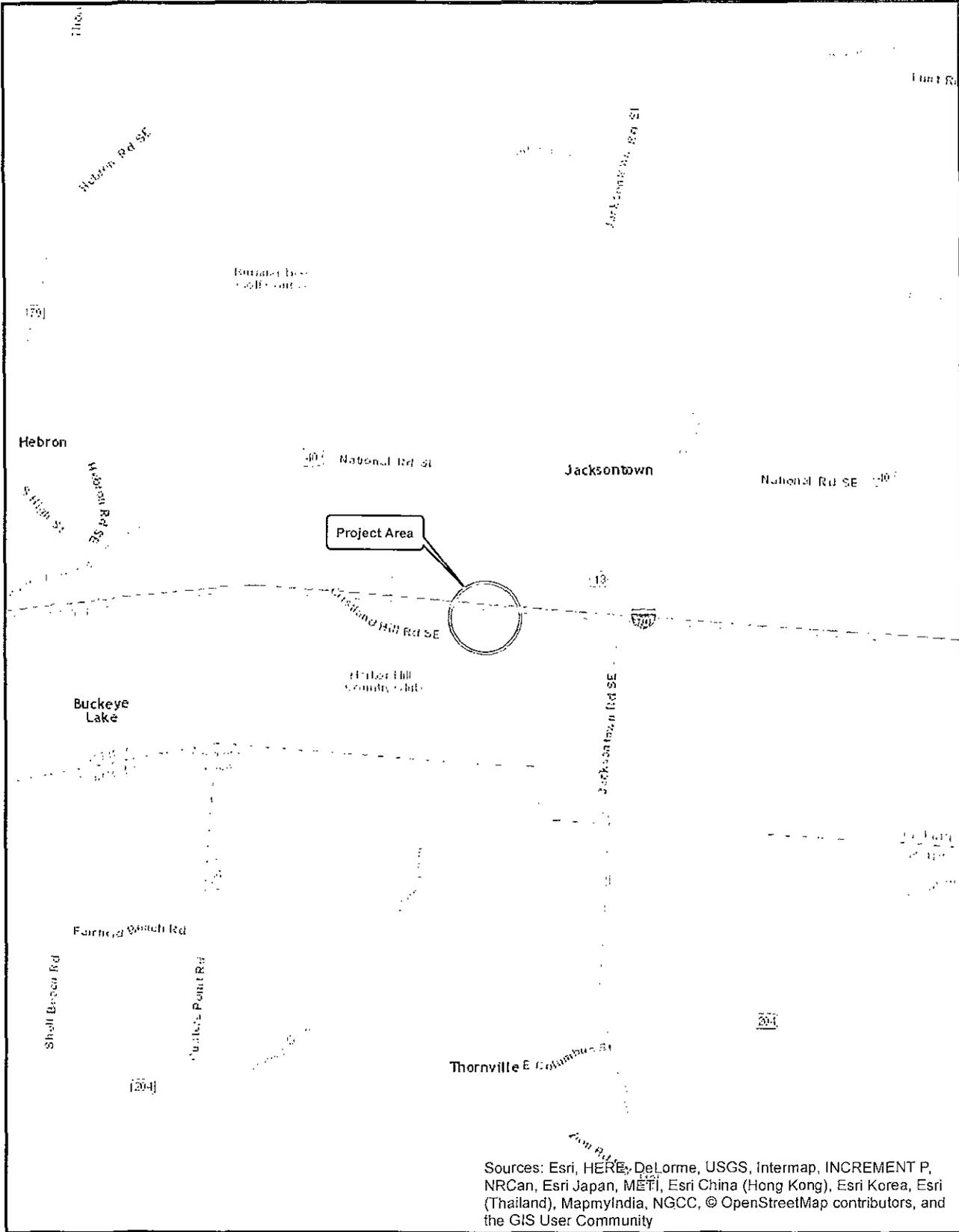
Sampling Point: UTP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/3	100						
4-8	10YR 4/2	95	7.5YR 5/6	5	C	M	SCL	
9+	10YR 4/2	80	7.5YR 5/6	20	C	M	SCL	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					² Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
Restrictive Layer (if observed):			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
Type: _____ Depth (inches): _____								
Remarks:			Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>surface</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
Soils were saturated from recent rainfall (0.6 inch) the day prior. Saturated conditions likely do not persist for the duration required to meet wetland hydrology criteria due to the field's functioning drain tile system. Evidence of this is provided by successful agricultural production throughout the area.		

EXHIBITS



Path: J:\20170367\GIS\Exhibit 1 - Location Map.mxd

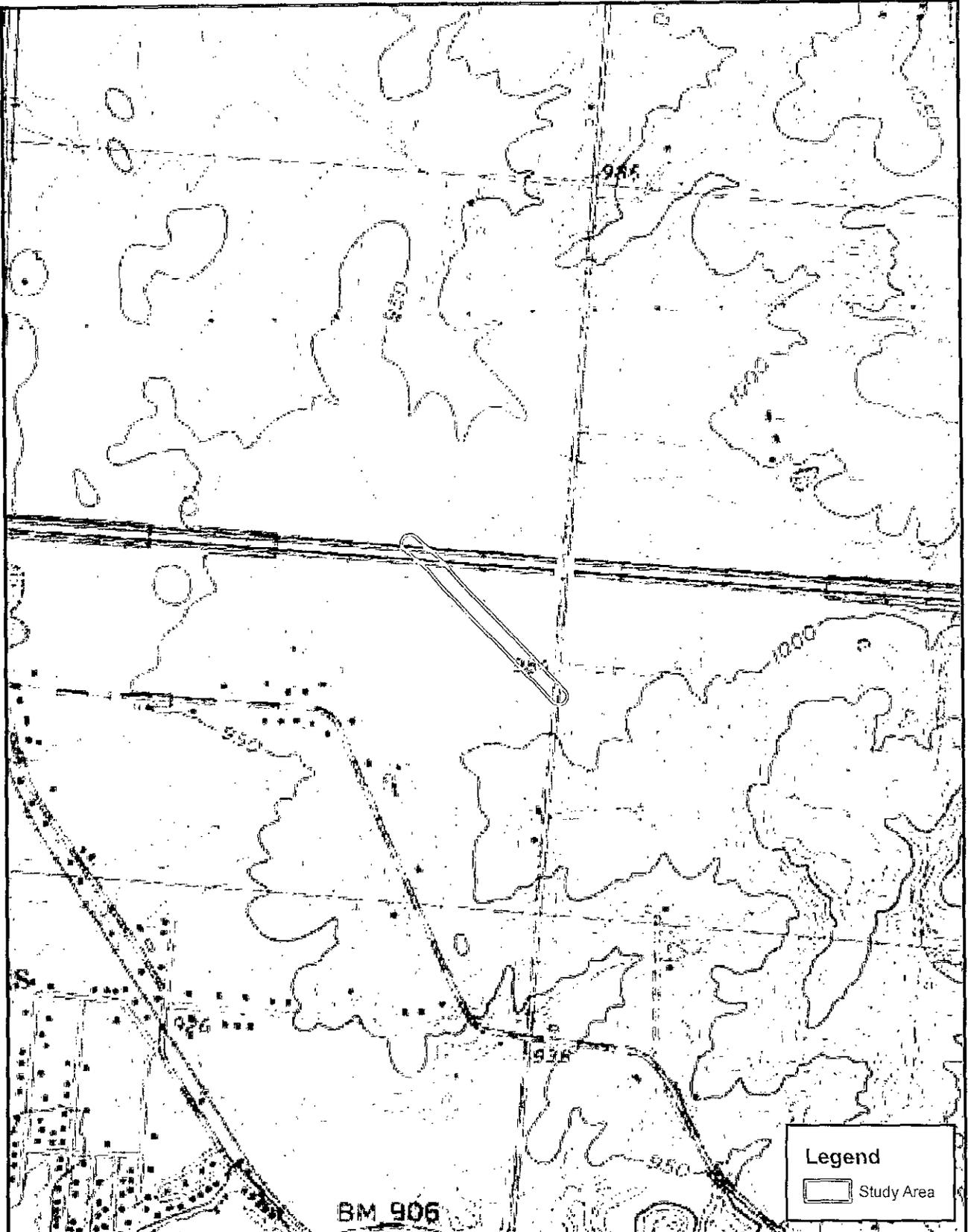
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

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LICKING TOWNSHIP, LICKING COUNTY, OHIO
Licking Trails 10" Gas Line Replacement
 Location Map
 Exhibit 1

SCALE: 1" = 1 Mile

0 0.5 1 2 Miles



Path: J:\20170367\GIS\Exhibit 2 - USGS.mxd

Legend

 Study Area

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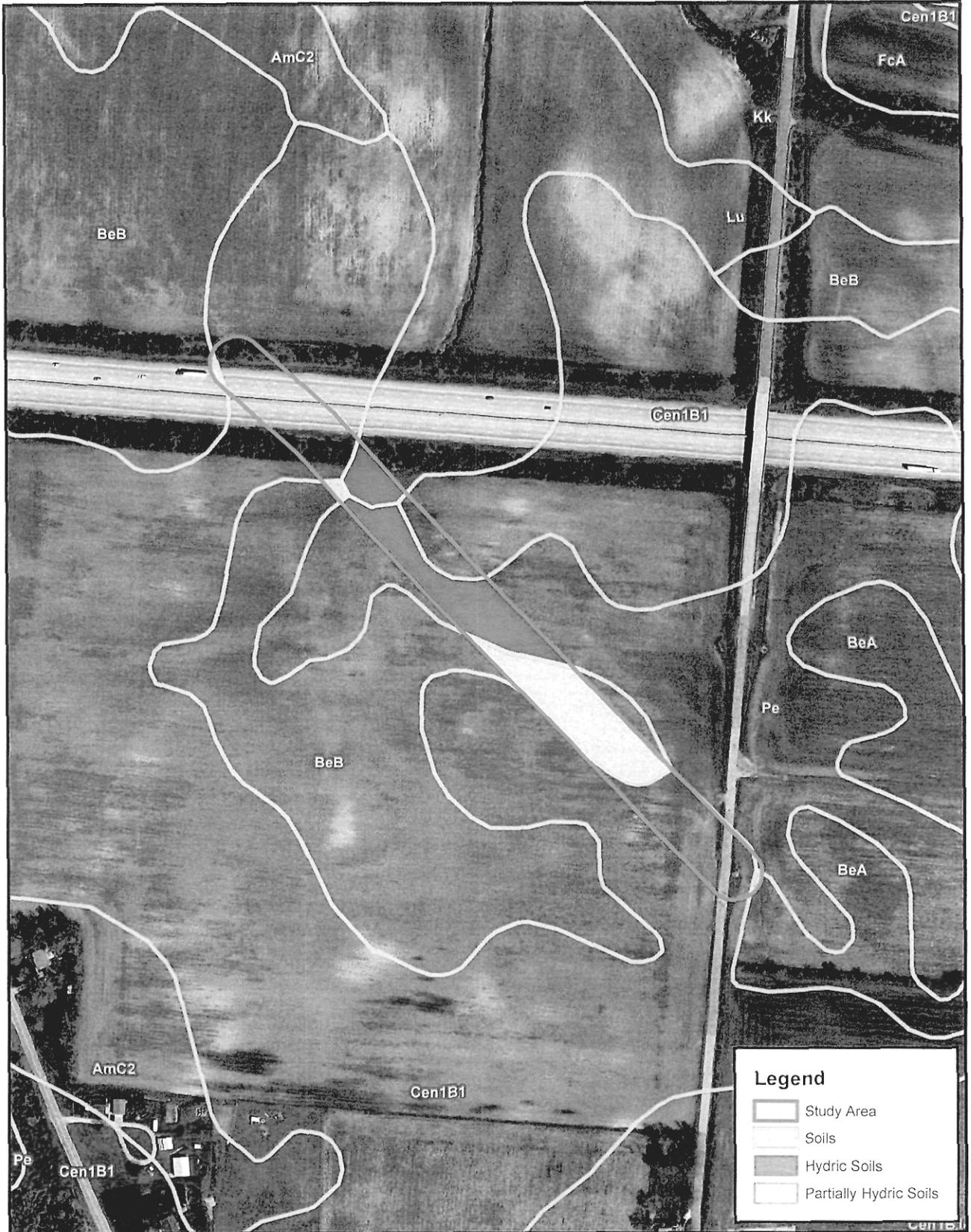
LICKING TOWNSHIP, LICKING COUNTY, OHIO

Licking Trails 10" Gas Line Replacement
 USGS Topographic Map
 Exhibit 2

SCALE: 1" = 1,000'

0 500 1,000 2,000 Feet

Source: USGS Thomville Quad Map (Pub. 1985)

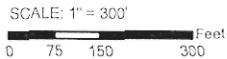


Legend

-  Study Area
-  Soils
-  Hyric Soils
-  Partially Hyric Soils

Path: J:\20170367\GIS\Exhibit 3A - Soils.mxd

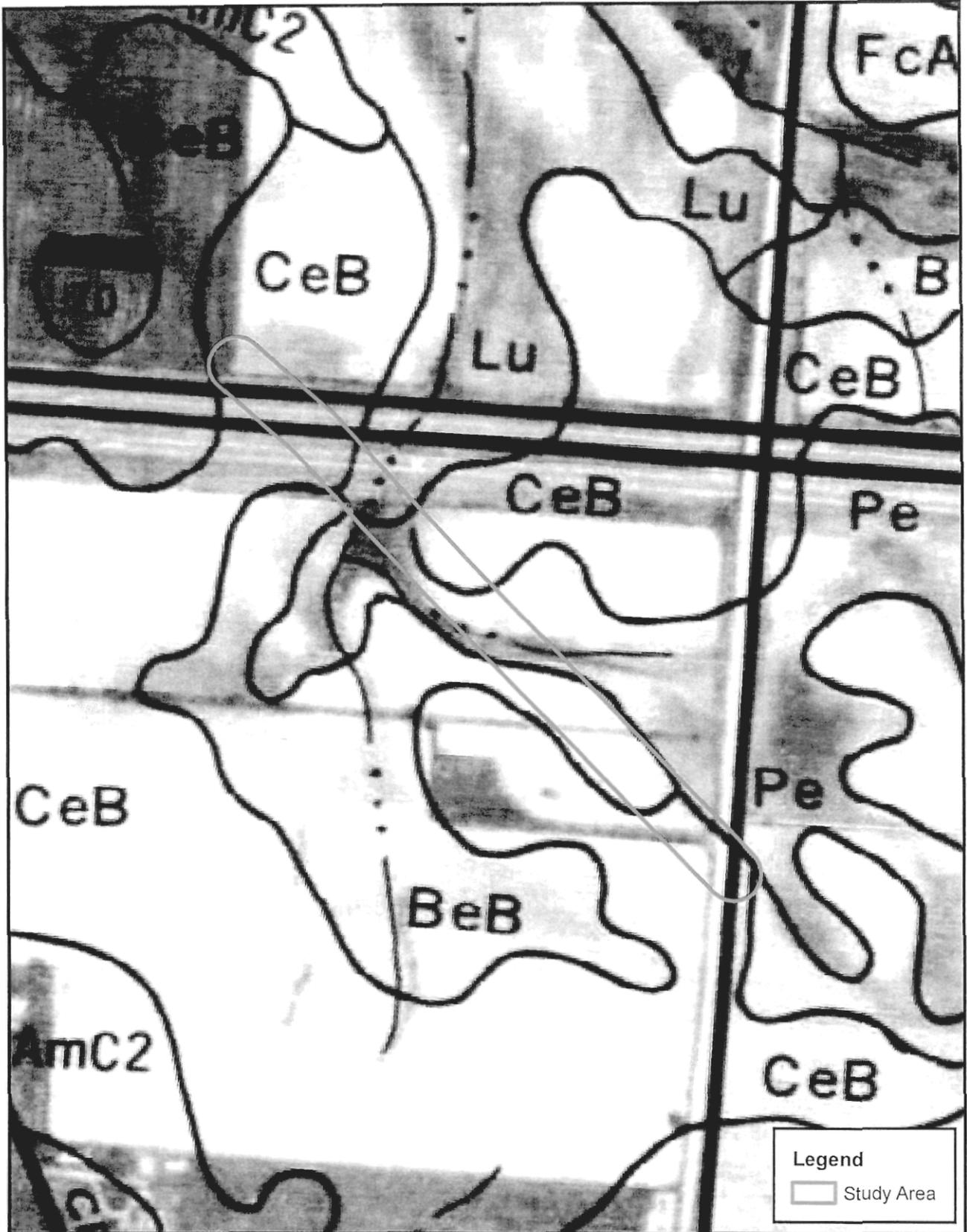
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LICKING TOWNSHIP, LICKING COUNTY, OHIO
 Licking Trails 10" Gas Line Replacement
 Soil Survey of Licking County
 Exhibit 3A



Source: Soils - NRCS, 2016; Aerial - OSIP, 2013



Path: J:\20170367\GIS\Exhibit 3B - Soils.mxd

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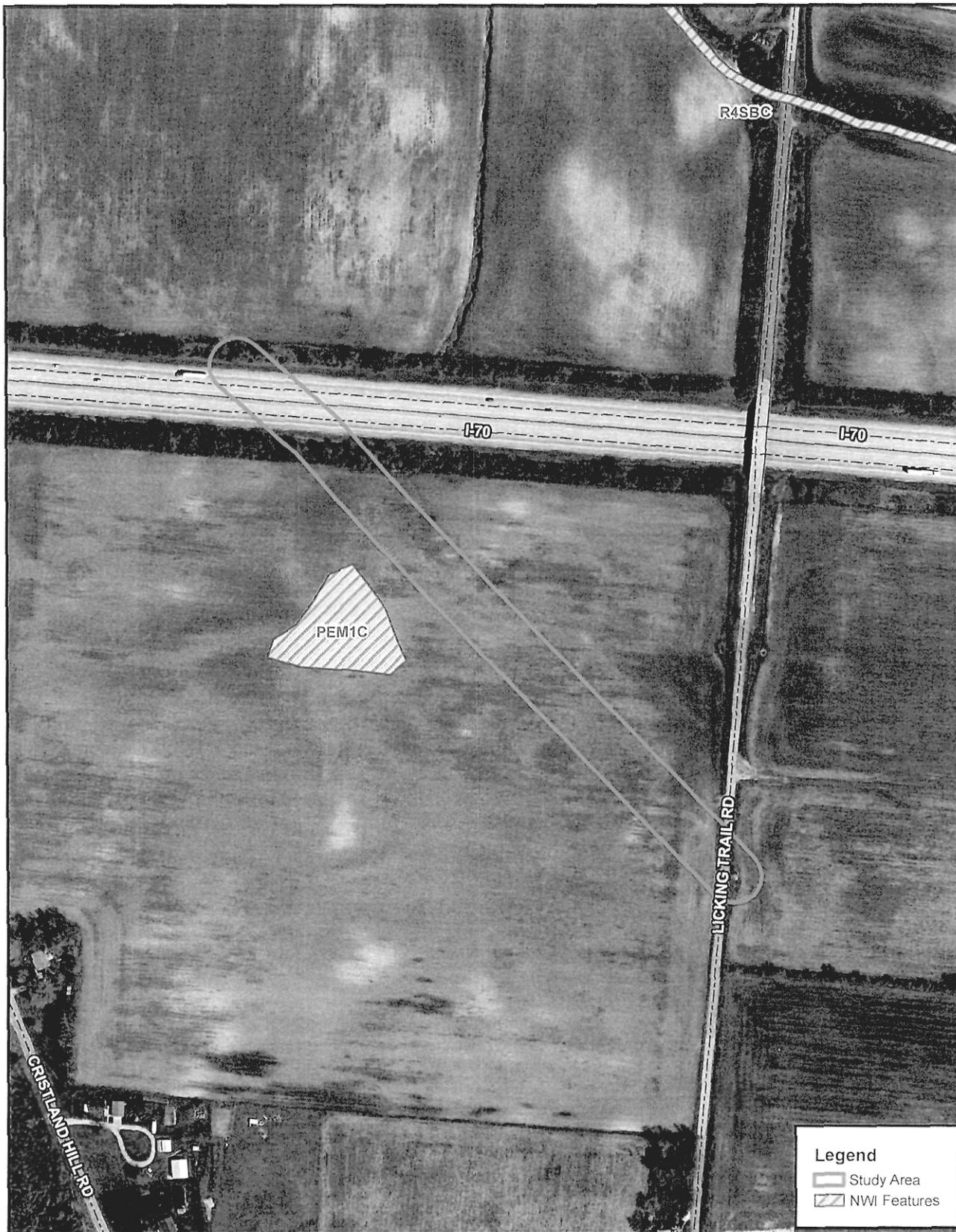
SCALE: 1" = 300'
 0 75 150 300 Feet

LICKING TOWNSHIP, LICKING COUNTY, OHIO
 Licking Trails 10" Gas Line Replacement
 Soils Map
 Exhibit 3B

Legend
 [Outline] Study Area



Source: Soils - USDA, 1992



Path: J:\20170367\GIS\Exhibit 4 - NWI.mxd

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SCALE: 1" = 100'



LICKING TOWNSHIP, LICKING COUNTY, OHIO

Licking Trails 10" Gas Line Replacement
 National Wetland Inventory Map
 Exhibit 4



Source: NWI Features - FWS, 2016;
 Aerial - OSIP, 2013



Path: J:\20170367\GIS\Exhibit 5 - Delineation Map.mxd

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SCALE: 1" = 100'
 0 75 150 300 Feet

LICKING TOWNSHIP, LICKING COUNTY, OHIO
**Licking Trails 10" Gas Line Replacement
 Delineation Map
 Exhibit 5**

Legend

- Study Area
- Stream
- Upland Data Point
- JD Point



Source: Aerial - OSIP, 2013

PHOTOGRAPHS



A legacy of **experience**. A reputation for **excellence**.



Photo 1: View of the beginning portion of the pipeline corridor facing northwest (EMH&T, 4/6/17).



Photo 2: View of the eastern portion of the pipeline corridor facing northwest (EMH&T, 4/6/17).



Photo 3: View of the middle portion of the pipeline corridor facing northwest (EMH&T, 4/6/17).



Photo 4: View of a drainage swale in the corridor facing northwest after a recent rain event (EMH&T, 4/6/17).



A legacy of **experience**. A reputation for **excellence**.



Photo 5: View of a second drainage swale in the corridor facing north after a recent rain event (EMH&T, 4/6/17).



Photo 6: View of the approximate area mapped as a NWI feature on Exhibit 4 (EMH&T, 4/6/17).



Photo 7: View of the headwaters of the offsite stream facing downstream (EMH&T, 4/6/17).



Photo 8: View of the corridor from the project terminus facing southeast (EMH&T, 4/6/17).