

Miller, Brian

From: Mia R Hall <mrhall@aep.com>
Sent: Friday, January 14, 2022 1:42 PM
To: Miller, Brian
Cc: Kevin M Stotts
Subject: [EXTERNAL] FW: 21-0715; AEP's North Delphos-Rockhill 138kV Transmission Line Rebuild Project

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Blue category

Brian,

ODNR was very speedy. Here is additional T&E info.



MIA R HALL | ENVIRONMENTAL SPECIALIST SR
MRHALL@AEP.COM | D:380.205.5239 | C:614.561.3590
8600 SMITHS MILL ROAD, NEW ALBANY, OH 43054

From: Nathan.Reardon@dnr.ohio.gov <Nathan.Reardon@dnr.ohio.gov>
Sent: Friday, January 14, 2022 1:40 PM
To: Valerie Clarkston <VClarkston@envsi.com>
Cc: Mia R Hall <mrhall@aep.com>; Michael Wellman <mwellman@envsi.com>
Subject: [EXTERNAL] RE: 21-0715; AEP's North Delphos-Rockhill 138kV Transmission Line Rebuild Project

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Hello Valerie,

Thank you for providing the upland sandpiper assessment. The DOW concurs that suitable habitat is not present within project area, and therefore, impacts to the upland sandpiper are not likely.

Thank you,
Nathan



Nathan Reardon
Compliance Coordinator
ODNR Division of Wildlife
2045 Morse Road
Columbus, OH 43229
Phone: 614-265-6741
Email: nathan.reardon@dnr.ohio.gov

Support Ohio's wildlife. Buy a license or stamp at wildohio.gov.

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Please consider the environment before printing this email.

From: Valerie Clarkston <VClarkston@envsi.com>
Sent: Friday, January 14, 2022 8:52 AM
To: Reardon, Nathan <Nathan.Reardon@dnr.ohio.gov>
Cc: mrhall@aep.com; Michael Wellman <mwellman@envsi.com>
Subject: 21-0715; AEP's North Delphos-Rockhill 138kV Transmission Line Rebuild Project

Good morning Mr. Reardon,

American Electric Power's (AEP's) North Delphos-Rockhill 138kV Transmission Line Rebuild Project (Project) is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. The ODNR-Division of Wildlife (DOW) indicated construction should be avoided in upland sandpiper habitat during the species' nesting period of 15 April to 31 July (ER letter attached). Upland sandpipers prefer to nest within larger, 123.5 to 494.2-acre (50 – 200 ha), open tracts of native grasslands, prairies, meadows to lightly grazed pastures and hayfields (Vickery et al. 1994, Mong 2005). Studies conducted in the Midwest and northeast also noted upland sandpipers avoid uniform, tall grasses and prefer to nest in areas with a variety of vegetation heights (Ailes 1980, Buhnerkempe and Westemeier 1988, Vickery et al. 1994). In Ohio, airport habitats support the majority (74%) of nesting upland sandpipers (Osborne and Peterson 1984). Biologists did not observe potentially suitable habitat for the upland sandpiper within the Project's AOI. Instead, most of the open-tract habitats observed included row crops and heavily grazed livestock pastures (see link below to access Project maps). Roadside tracts of grassland do exist but are likely too small and fragmented to support a breeding population of upland sandpipers. Based on current proposed Project activity, recommendations within ODNR's environmental review letter, and the above review of the Project area, no conflicts with upland sandpipers are anticipated.

[Mapping - North Delphos-Rockhill 138kV Transmission Line Rebuild Project](#)

On behalf of AEP, ESI is requesting concurrence from ODNR on the above assessment of upland sandpipers with regards to the North Delphos-Rockhill 138kV Transmission Line Rebuild Project. Please reach out to us with any questions or requests for additional information.

Thank you,

Valerie



Valerie Clarkston, M.S., CWB®, CE

Project Manager

Environmental Solutions & Innovations, Inc.
8 Bettys Lane | Scott Depot, WV 25560 | USA
office: 304.760.5803 **fax:** 513.451.3321
direct: 513.591.4315 **cell:** 513.382.0925
vclarkston@envsi.com | www.envsi.com

Literature Cited Above:

Ailes, I. W. 1980. Breeding biology and habitat use of the upland sandpiper in central Wisconsin. Passenger Pigeon 42:53-63.

Buhnerkempe, J. E., and R. L. Westemeier. 1988. Breeding biology and habitat of upland sandpipers on prairie-chicken sanctuaries in Illinois. Transactions of the Illinois Academy of Science 81:153-162.

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From: Valerie Clarkston <VClarkston@envsi.com>
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Cc: mrhall@aep.com; Michael Wellman <mwellman@envsi.com>

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[Mapping - North Delphos-Rockhill 138kV Transmission Line Rebuild Project](#)

On behalf of AEP, ESI is requesting concurrence from ODNR on the above assessment of upland sandpipers with regards to the North Delphos-Rockhill 138kV Transmission Line Rebuild Project. Please reach out to us with any questions or requests for additional information.

Thank you,

Valerie



Valerie Clarkston, M.S., CWB®, CE

Project Manager

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Miller, Brian

From: Ohio, FW3 <ohio@fws.gov>
Sent: Tuesday, August 03, 2021 10:19 AM
To: Lubbers, Jake
Cc: nathan.reardon@dnr.state.oh.us; Parsons, Kate; Wilburn, Beth; rachanderson@easi.com; mrhall@aep.com; Lipp, Thomas
Subject: [EXTERNAL] AEP North Delphos-Rockhill 138 kV Transmission Line Rebuild Project, Allen and Putnam Counties, Ohio



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# 03E15000-2021-TA-1839

Dear Mr. Lubbers,

The U.S Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found 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 breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet 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, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal 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 removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is 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, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then 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 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. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

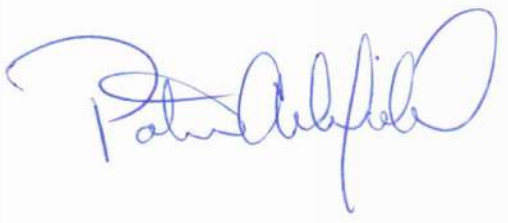
Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army 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. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or 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, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@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,



Patrice Ashfield

Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Kate Parsons, ODNR-DOW



Ohio Department of Natural Resources

MIKE DeWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate

John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

September 1, 2021

Jake Lubbers
AECOM
525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Re: 21-0715; AEP North Delphos-Rockhill 138 kV Transmission Line Rebuild Project

Project: The proposed project involves rebuilding approximately 15 miles of transmission line between North Delphos Substation and Rock Hill Substation.

Location: The proposed project is located in Allen and Putnam Counties, Ohio.

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

Natural Heritage Database: The Natural Heritage Database has the following data at or within a one mile radius of the project area:

Purple wartyback (*Cyclonaias tuberculata*), SC
Wavy-rayed lampmussel (*Lampsilis fasciola*), SC
Creek heelsplitter (*Lasmigona compressa*), SC
Clubshell (*Pleurobema clava*), E, FE
Purple lilliput (*Toxolasma lividus*), E
Deertoe (*Truncilla truncata*), SC
Greater redhorse (*Moxostoma valenciennesi*), T

The review was performed on the project area specified in the request as well as an additional one mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity. Additional comments on some of the features may be found in pertinent sections below.

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

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federal endangered, and FT = federal threatened.

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

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the “OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING”. If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS “Range-wide Indiana Bat Survey Guidelines.” If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Erin Hazelton for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the clubshell (*Pleurobema clava*), a state endangered and federally endangered mussel, the northern riffleshell (*Epioblasma torulosa rangiana*), a state endangered and federally endangered mussel, and the pondhorn (*Uniomerus tetralasmus*), a state threatened mussel. This project must not have an impact on freshwater native mussels at the project site. This applies to both listed and non-listed species. Per the Ohio Mussel Survey Protocol (2020), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. This is further explained within the Ohio Mussel Survey Protocol. Therefore, if in-water work is planned in any stream that

meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, as a last resort, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. The Ohio Mussel Survey Protocol (2020) can be found at:

<https://ohiodnr.gov/static/documents/wildlife/permits/dow-protocol-ohio-mussel-survey.pdf>

The project is within the range of the pirate perch (*Aphredoderus sayanus*), a state endangered fish, and the greater redhorse (*Moxostoma valenciennesi*), a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

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

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

Water Resources: The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

Appendix E Ecological Resources Inventory Report

ECOLOGICAL SURVEY REPORT
LIMA TO FORT WAYNE 138 KV REBUILD PROJECT
AMERICAN, BATH, JENNINGS, AND SUGAR CREEK TOWNSHIPS
ALLEN AND PUTNAM COUNTIES, OHIO

10 February 2022

Prepared for:



BOUNDLESS ENERGYSM

American Electric Power
8500 Smith's Mill Road
New Albany, OH 43054

Prepared by:



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Ravenna, OH • Indianapolis, IN • Orlando, FL • Springfield, MO • Pittsburgh, PA • Teays Valley, WV

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION.....	1
2.0 METHODS	1
2.1 Desktop Evaluation	1
2.2 Threatened and Endangered Species	1
2.3 Aquatic Resource Delineations	1
3.0 RESULTS	2
3.1 Desktop Evaluation	2
3.1.1 Topography and Drainage	2
3.1.2 Soil Survey	2
3.1.3 National Wetlands Inventory	2
3.1.4 Aerial Imagery	2
3.2 Threatened and Endangered Species	2
3.3 Aquatic Resource Delineations	3
4.0 CONCLUSION	4
5.0 LITERATURE CITED.....	4

Appendices

Appendix A: Figures
Appendix B: Agency Correspondence/Desktop Assessment
Appendix C: Soil Report
Appendix D: NWI Table
Appendix E: RTE Table
Appendix F: Wetland, Stream and Pond Tables
Appendix G: Site Photos
Appendix H: Wetland and Stream Datasheets

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1.0 Introduction

American Electric Power (AEP) retained Environmental Solutions & Innovations, Inc. (ESI) to perform an ecological survey for the Lima to Fort Wayne (formerly North Delphos to Rockhill) 138 kV Transmission Line Rebuild Project in American, Bath, Jennings, and Sugar Creek Townships, Allen and Putnam counties, Ohio within the project's proposed Area of Investigation (AOI; Appendix A, Figures 1 and 2). ESI completed a field review of the AOI on 28, 29, and 30 June, 1 July, 2 September, and 9 December 2021. This report outlines review of published resource materials, existing site conditions, agency coordination, and results of the field investigation.

2.0 Methods

2.1 Desktop Evaluation

Prior to visiting the site, available topographic, aerial, soils, flood, and National Wetlands Inventory (NWI) mapping is reviewed to determine onsite areas that may contain aquatic resources. State stream designations, navigability, and other criteria that would determine agency jurisdiction are also reviewed.

2.2 Threatened and Endangered Species

To assist with Endangered Species Act (ESA), Bald and Golden Eagle Protection Act (BGEPA), and Migratory Bird Treaty Act (MBTA) compliance, a project review was requested, and a response was received 3 August 2021 from U.S. Fish and Wildlife Service (USFWS) Ohio Field Office (Appendix B). To identify potential conflicts with state-listed species and appropriately complete Ohio Rapid Assessment Methods (ORAMs), a request was submitted to Ohio Department of Natural Resources (ODNR) and a response was received on 1 September 2021 (Appendix B).

2.3 Aquatic Resource Delineations

Wetland delineation procedures follow the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region ERDC/EL TR-12-1, Version 2.0 (USACE 2012), Midwest Region ERDC/EL TR-10-16, Version 2.0 (USACE 2010), and the 1987 Corps of Engineers Wetland Delineation Manual (USACE 1987). The federally regulated Ordinary High Water Mark (OHWM) of streams is delineated using the USACE Regulatory Guidance Letter 05-05 – Guidance on Ordinary High Water Mark Identification. Each stream is categorized in regard to its flow regime as perennial, intermittent, or ephemeral, as defined by the USACE. Delineated aquatic resources are classified according to the Classification of Wetland

and Deepwater Habitats of the United States (Cowardin et al. 1979). Each wetland identified is evaluated consistent with the Ohio Rapid Assessment Method (ORAM, Version 5.0), developed by the Ohio Environmental Protection Agency (OEPA). Streams with drainage areas less than one square mile are evaluated using the Field evaluation manual for Ohio's primary headwater habitat streams (OEPA 2020). Aquatic resource boundaries and sample points are surveyed using a GPS with sub-meter accuracy.

3.0 Results

3.1 Desktop Evaluation

3.1.1 Topography and Drainage

The project appears on the Cairo, Elida, Kalida, and Ottoville, Ohio U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps (Appendix A, Figure 1). The AOI consists of rolling hills ranging from approximately 735 feet to 880 feet. The site drains to the Auglaize and Ottawa rivers, and active quarries are within 3 miles of the project.

3.1.2 Soil Survey

The Natural Resources Conservation Service (NRCS) maps 35 soil series considered hydric or partially hydric within the AOI. The NRCS soil map and hydric soils list is provided in Appendix C.

3.1.3 National Wetlands Inventory

Twenty-nine NWI mapped resources (PEM1A, PEM1Ad, PEM1C, PFO1A, PFO1C, PSS1A, R2UBH, R4SBC, and R5UBH) were identified within the AOI. Note that NWI maps are derived from aerial photo interpretation and are suitable for general planning purposes only; they typically do not show all the wetland or watercourse resources within any given area. All areas were field reviewed. A table summarizing mapped NWI resources within the AOI is provided in Appendix D.

3.1.4 Aerial Imagery

Aerial mapping from 1995 through 2021 shows the site as dominated by mixed mesophytic forest, agricultural fields, and urban/suburban areas. Aerial representation of the site is provided in Appendix A, Figure 2.

3.2 Threatened and Endangered Species

Suitable habitat exists within the AOI for state and federal listed bat species with agency-recommended tree clearing dates of 1 October to 31 March, if required. A

desktop assessment for features potentially suitable as bat hibernacula revealed 13 active and historic stone quarries within 3 miles of the North Delphos to Rockhill Rebuild Project (Appendix B). It is presumed these quarries entail only surface mining techniques and no underground voids were developed for stone or mineral extraction. Portal searches within the Project's AOI occurred concurrent with wetland and stream delineations, and no features potentially suitable for hibernating bats have been documented.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. The ODNR-Division of Wildlife (DOW) indicates avoiding construction in upland sandpiper habitat during the species' nesting period of 15 April to 31 July. Upland sandpipers prefer to nest within larger (123.5 to 494 acres), open tracts of native grasslands, prairies, meadows to lightly grazed pastures and hayfields (Vickery et al. 1994, Mong 2005). Studies conducted in the Midwest and Northeast also noted upland sandpipers avoid uniform, tall grasses and prefer to nest in areas with a variety of vegetation heights (Ailes 1980, Buhnerkempe and Westemeier 1988, Vickery et al. 1994). In Ohio, airport habitats support the majority (74%) of nesting upland sandpipers (Osborne and Peterson 1984). Suitable upland sandpiper habitat was not documented within the project's AOI. Instead, most open-tract habitats observed included row crops and heavily grazed livestock pastures. Roadside tracts of grassland exist but are likely too small and fragmented to support a breeding population of upland sandpipers. ODNR-DOW concurred with absence of suitable habitat findings on 14 January 2022 (Appendix B).

To reduce impacts to indigenous aquatic species and habitat, the ODNR-DOW recommends avoiding in-water work in perennial streams from 15 April to 30 June. Furthermore, if in-stream work is anticipated in streams considered suitable for freshwater mussels, the ODNR-DOW recommends completion of a mussel survey in the project area by a professional malacologist. A summary table of rare, threatened, and endangered species potentially occurring within the AOI is provided in Appendix E.

3.3 Aquatic Resource Delineations

Sixty-two wetlands, 27 stream segments, and 2 ponds were identified and delineated within the AOI and are summarized in Appendix F. Representative photographs of aquatic resources are provided in Appendix G. Field data sheets for wetland and upland sample points, ORAM, and HHEI forms are provided in Appendix H. The aquatic resource delineation map depicting resource locations is provided in Appendix A, Figure 2.

4.0 Conclusion

Desktop review and field investigations completed 28, 29, and 30 June, 1 July, 2 September, and 9 December 2021 identified 62 wetlands, 27 stream segments, and 2 ponds within the AOI (Appendix A, Figure 2). Temporary or permanent impacts to these resources may require permits from the USACE and or OEPA.

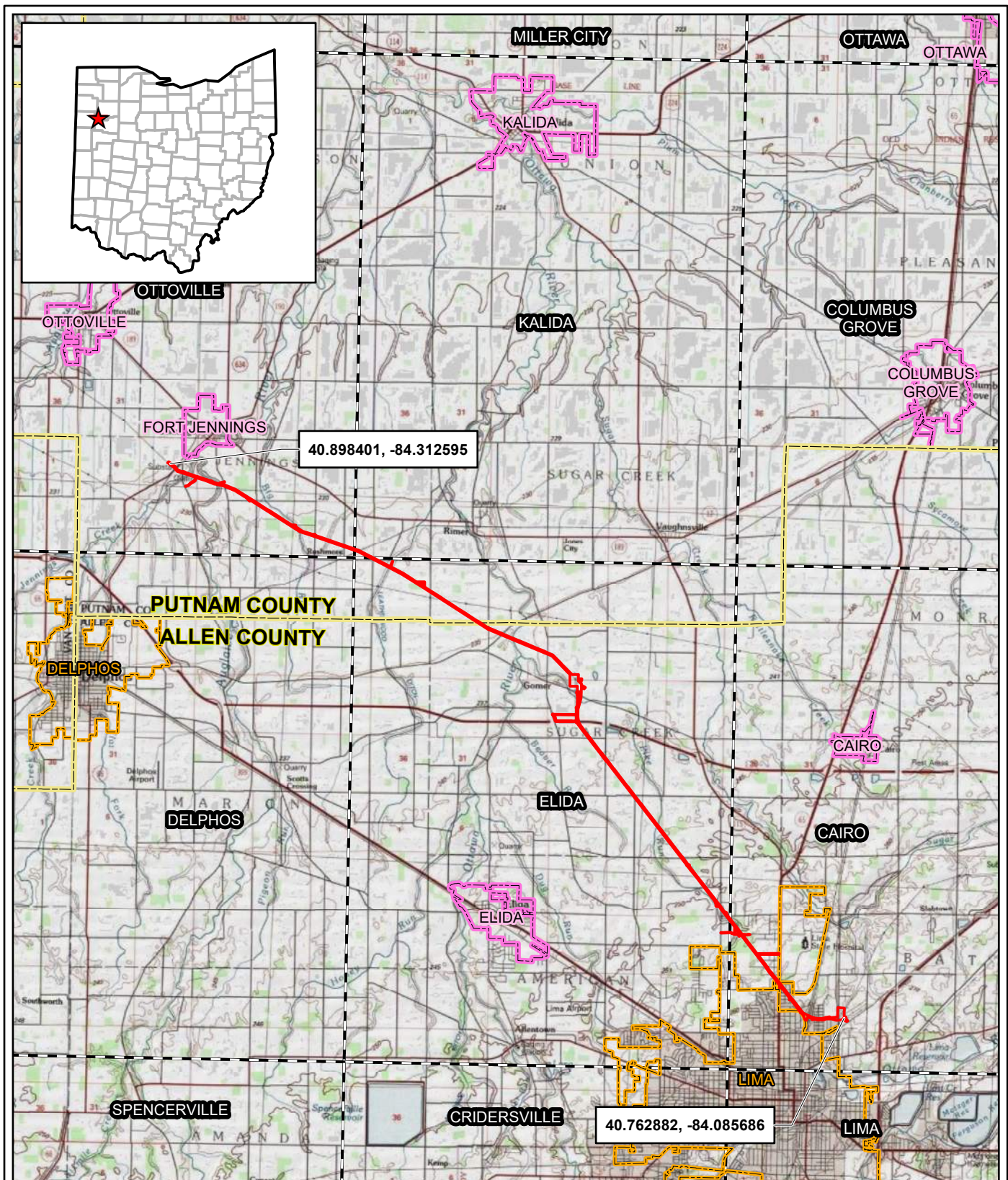
ODNR and USFWS recommend seasonal tree clearing to avoid impacts to state and federally listed bat species. ODNR has recommendations regarding in-water work to avoid impacts to state-listed fish and mussel species. If construction cannot adhere to seasonal tree clearing dates or requires in-water work, additional coordination with the agencies and/or surveys may be needed.

5.0 Literature Cited

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APPENDIX A FIGURES



Area of Investigation (AOI)
 Village
 City
 USGS 7.5-minute Quad Boundary
 County Boundary

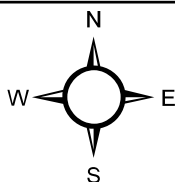


Figure 1. Location of the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Project No.
1730

0 1.75 3.5
Miles
Base Map: USGS Topographic Map



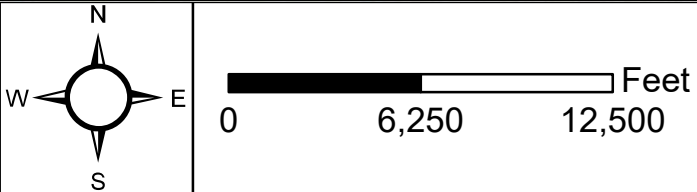
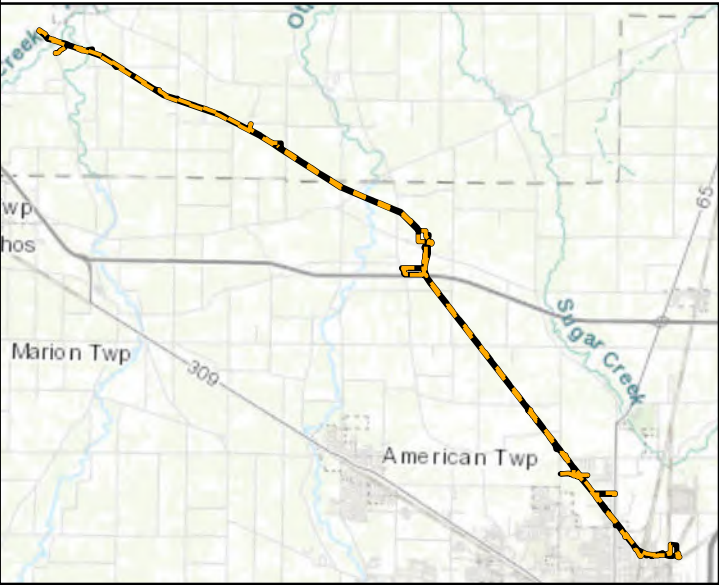
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map Key

- Area Detailed on Subsequent Maps 1 through 46
- National Hydrography Dataset (NHD) Stream
- Area of Investigation (AOI)



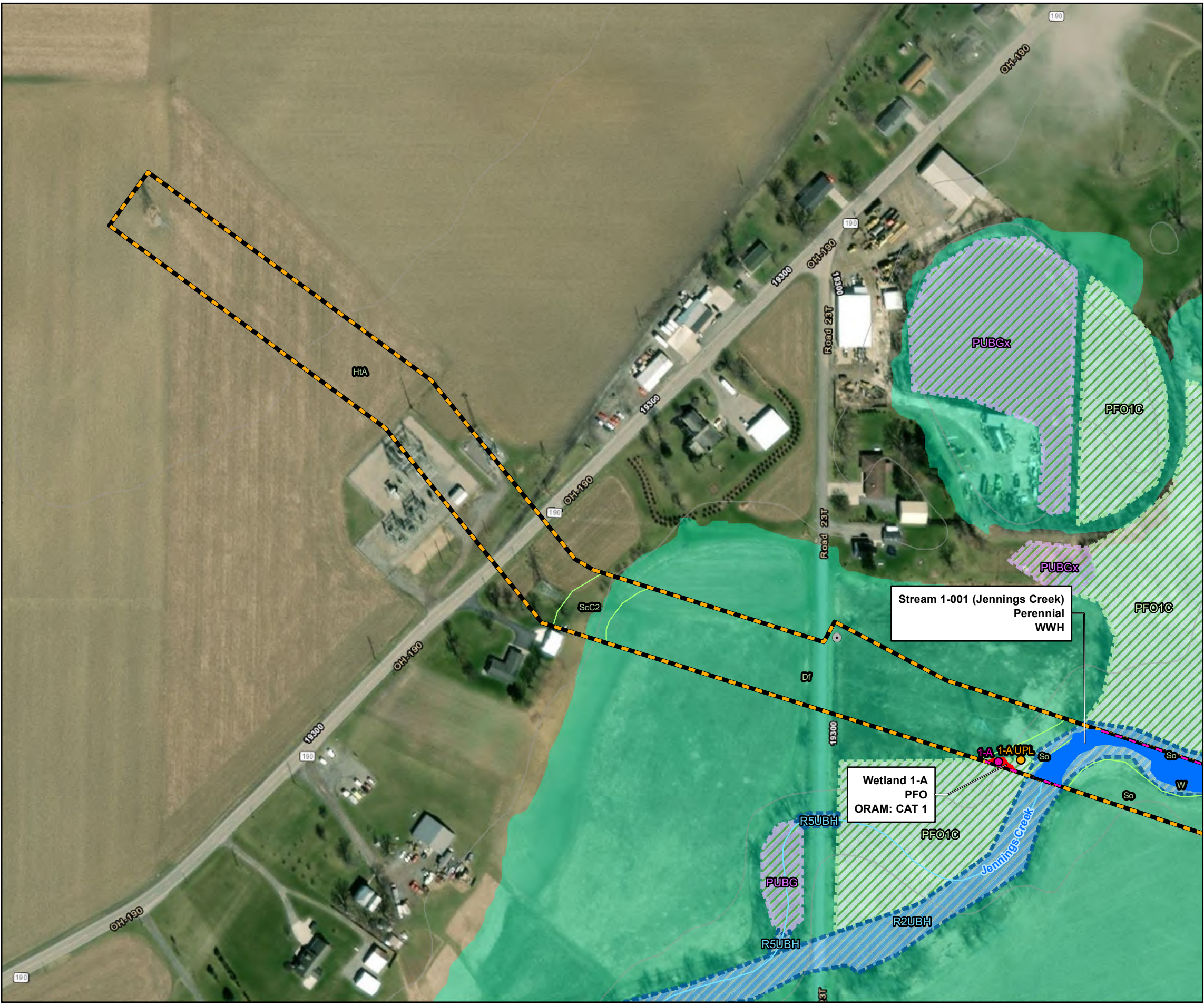
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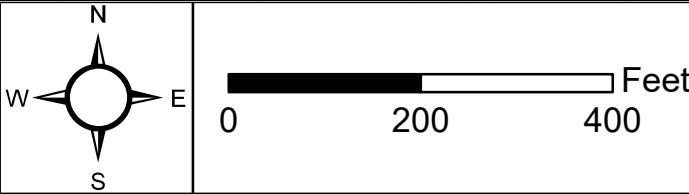
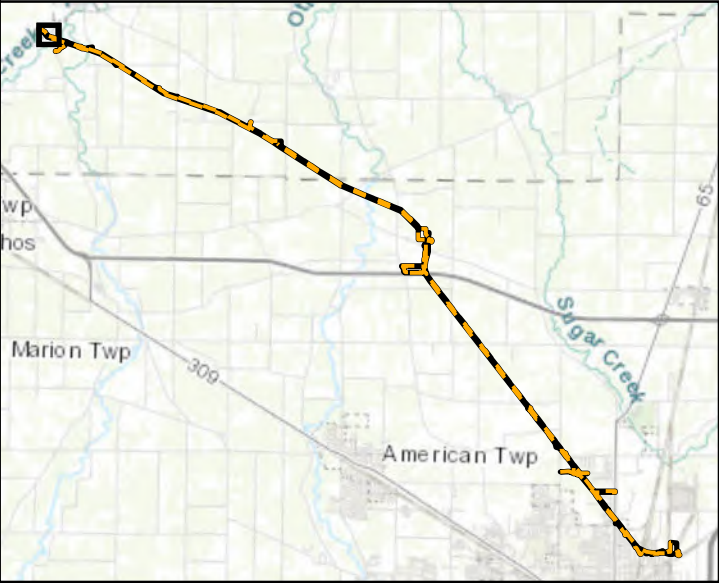
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.



- Culvert Location
- Resource Continues Off-Site
- Field-Delineated Stream
- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA 100-Year Floodplain
- Field-Delineated Wetland**
- PFO
- National Wetland Inventory (NWI)**
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Sample Point**
- Upland
- Wetland



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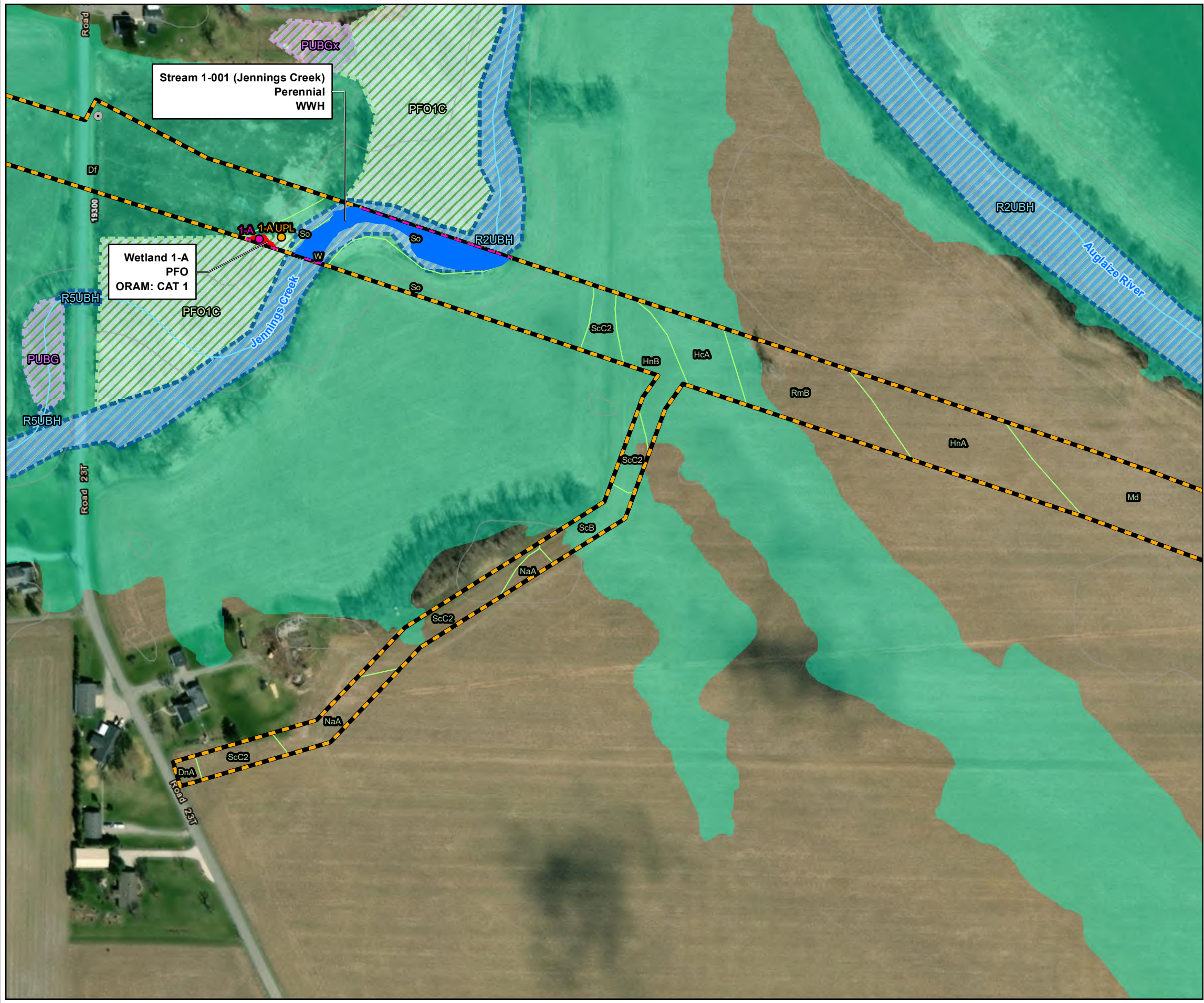
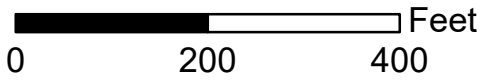
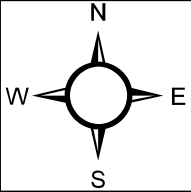
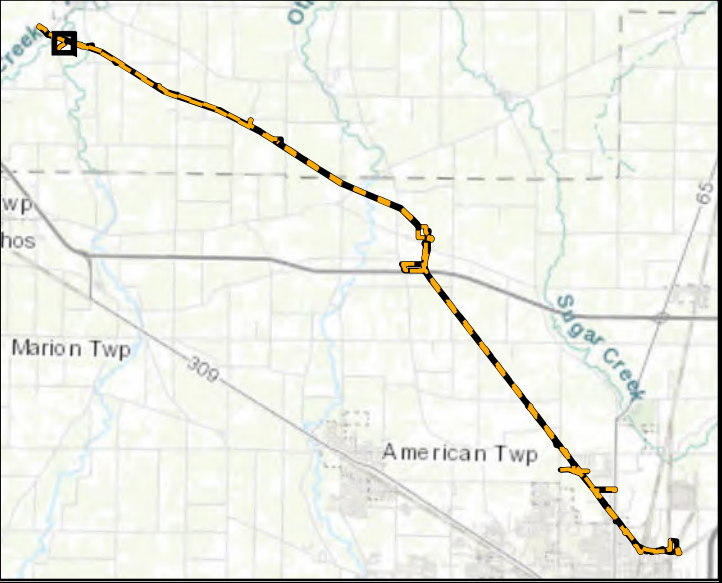


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

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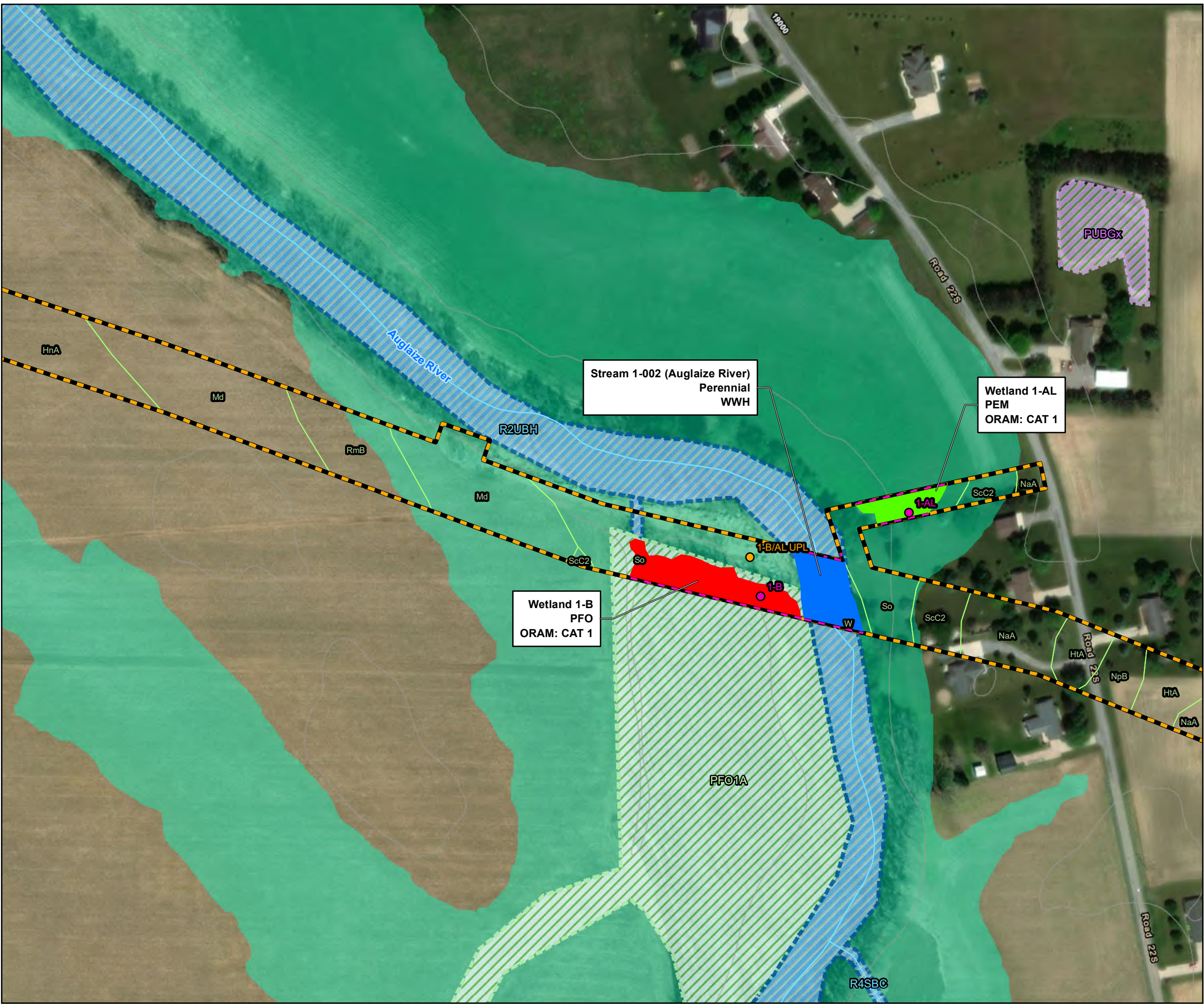


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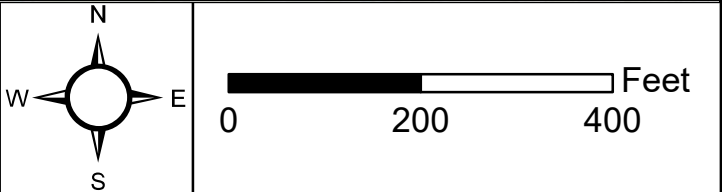
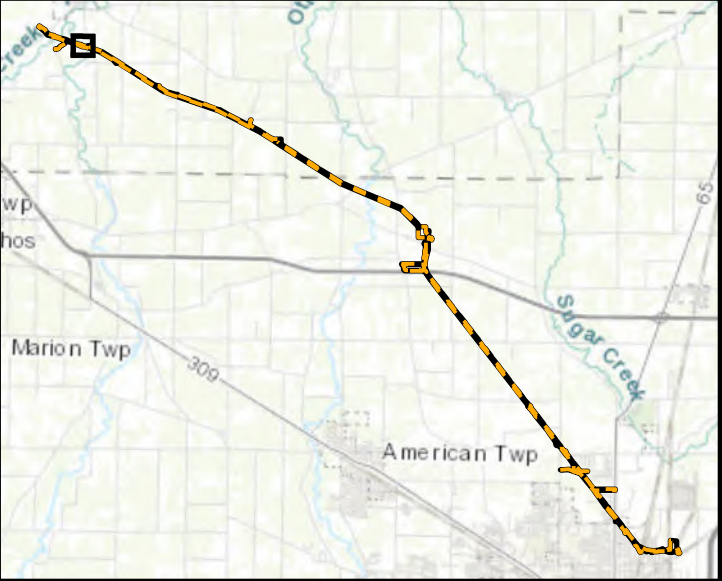


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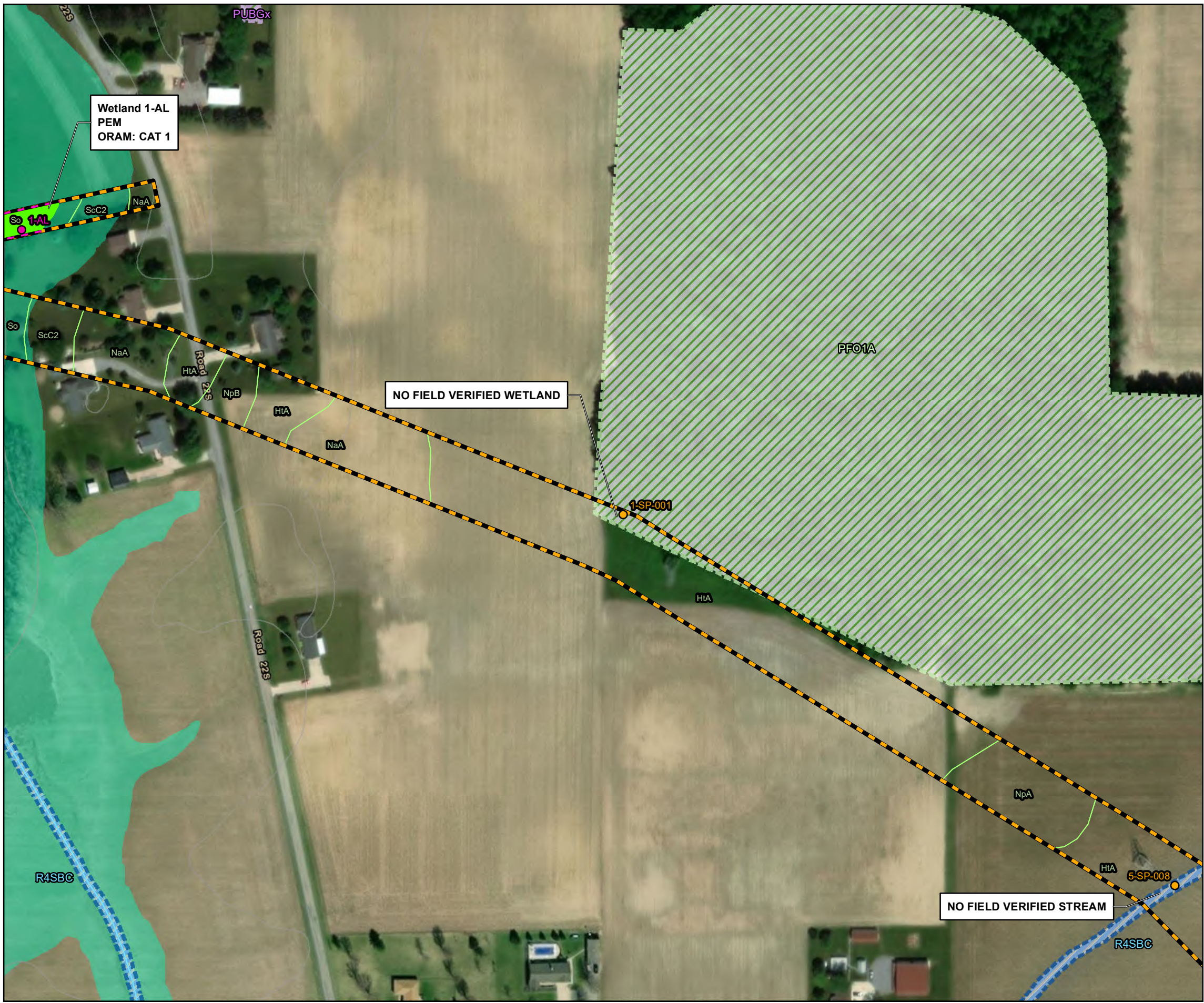
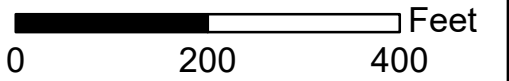
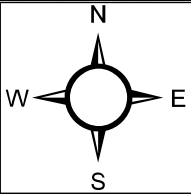
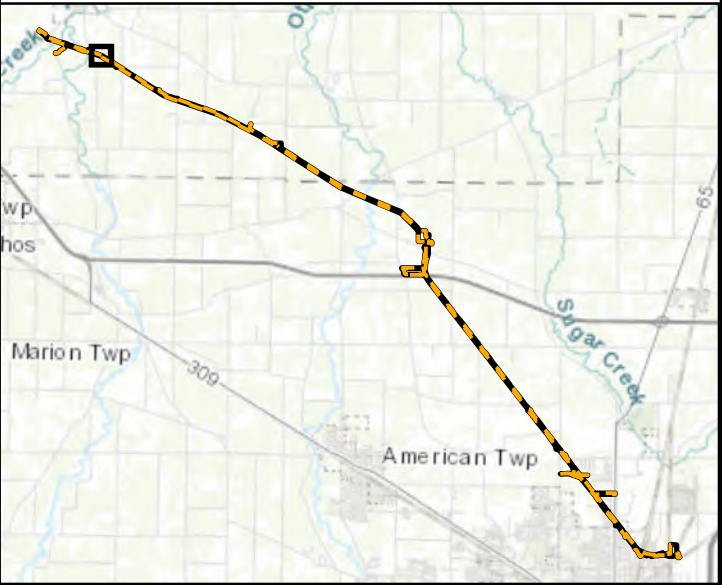


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

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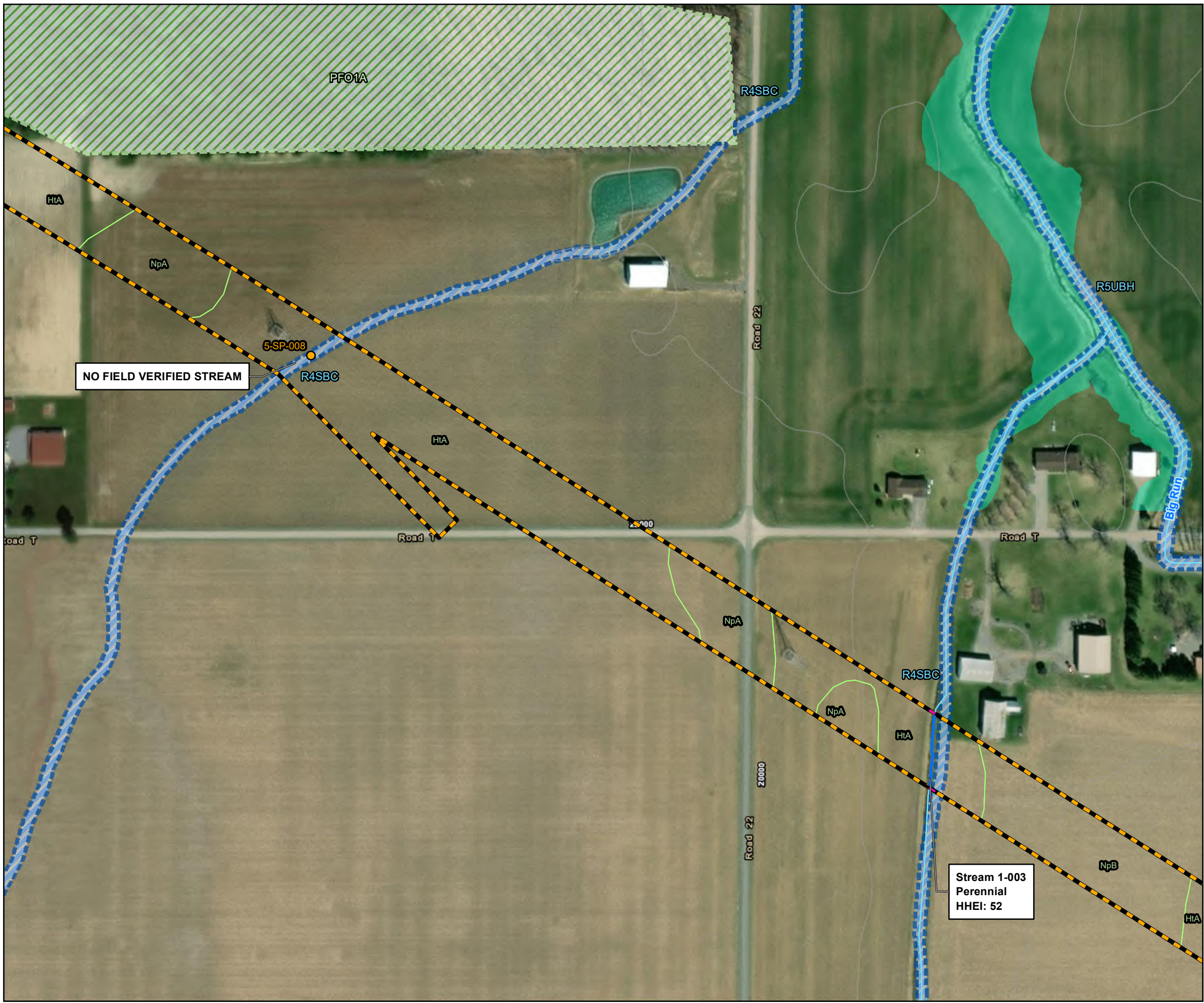
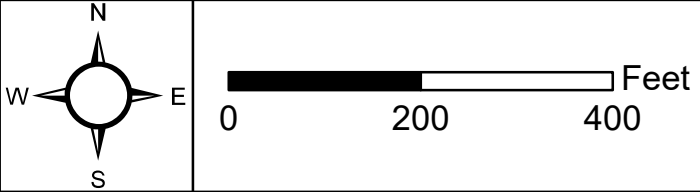
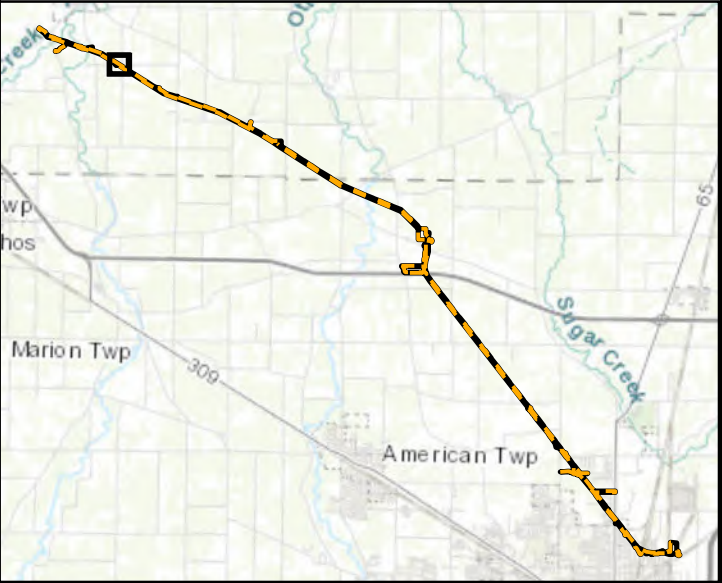


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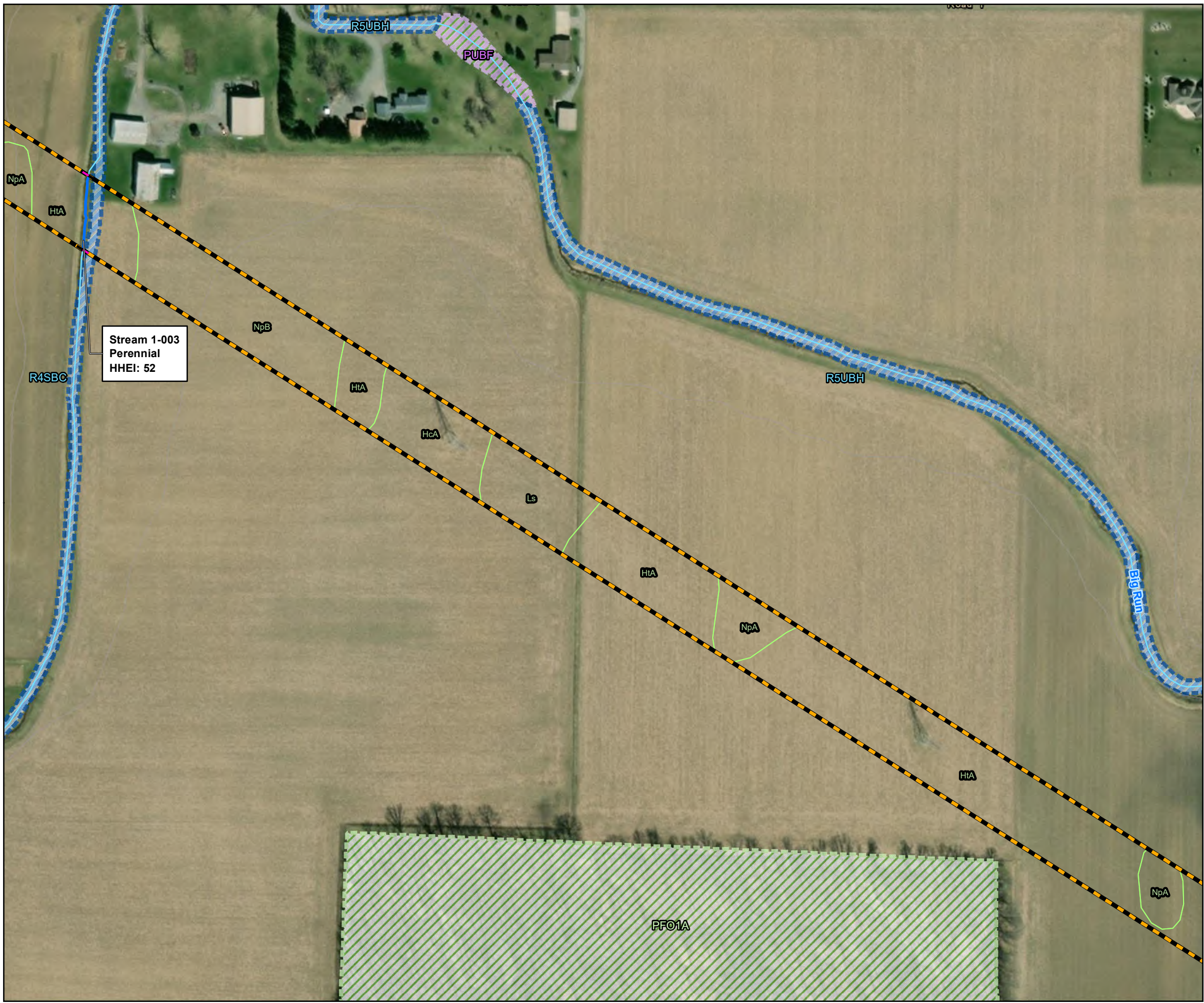
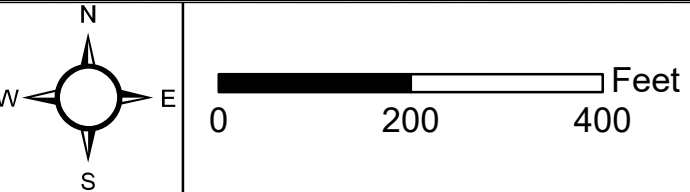
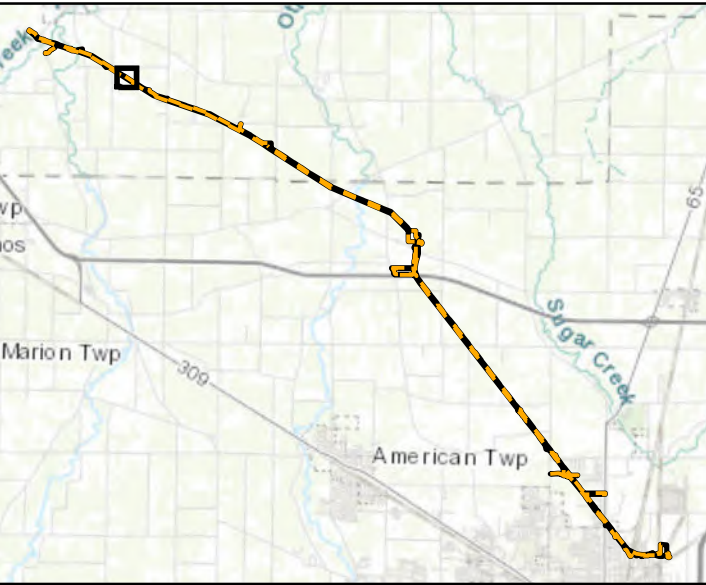


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

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- Field-Delineated Stream
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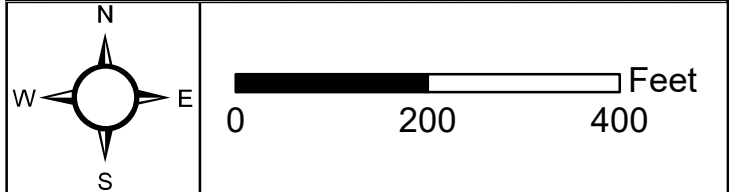
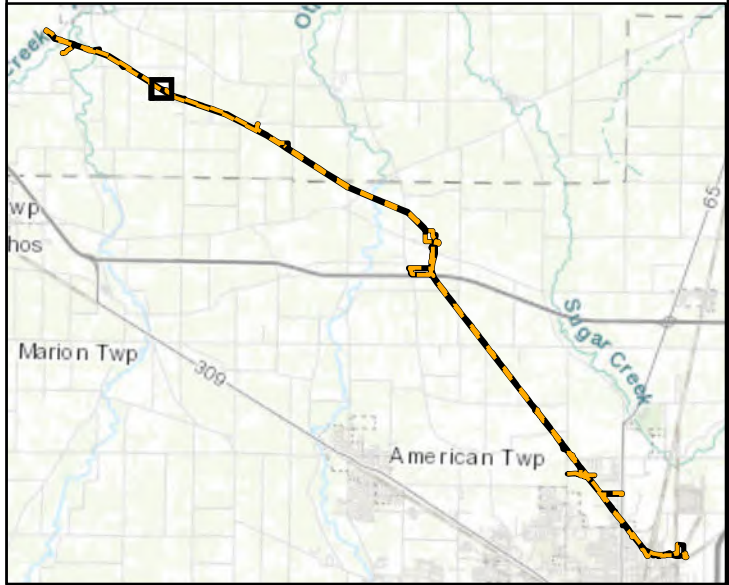
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 7 of 46

- Culvert Location
- Resource Continues Off-Site
- Field-Delineated Stream
- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
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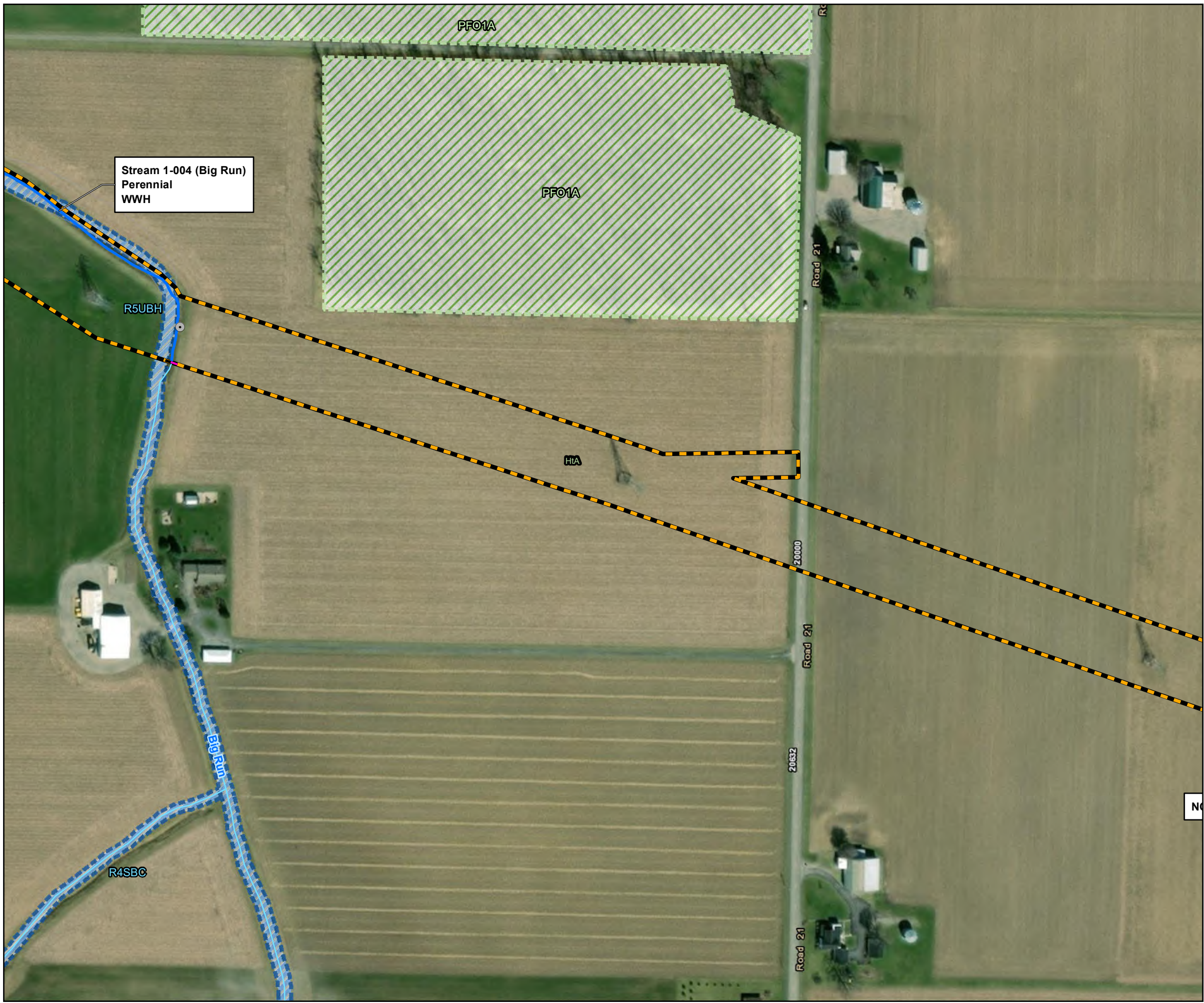
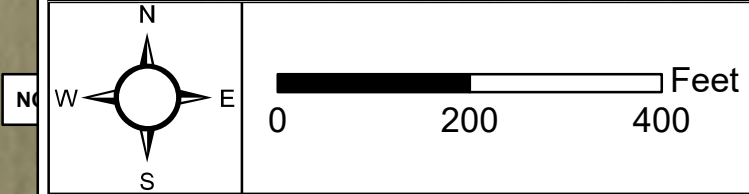
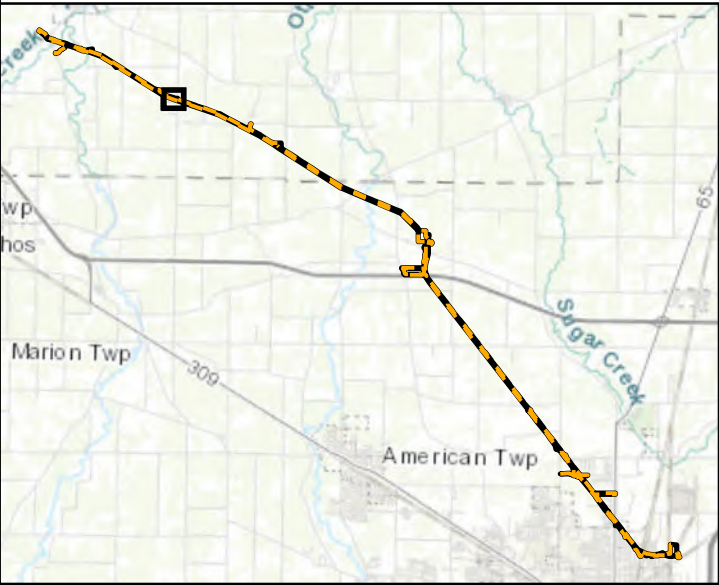


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 8 of 46

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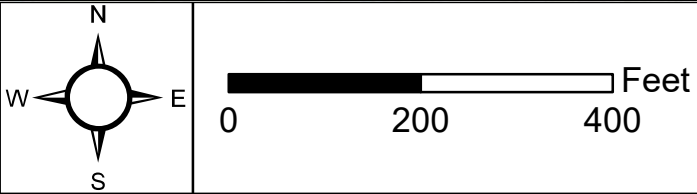
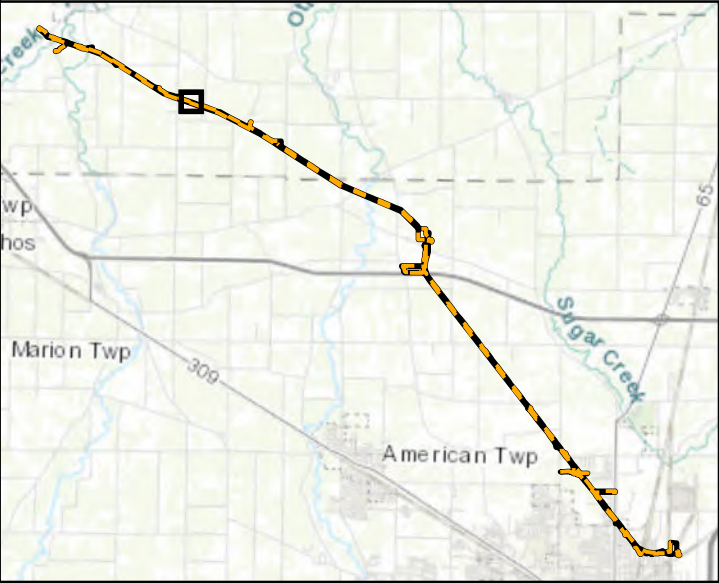


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Figure 2. Ecological Survey on the AEP
Lima - Fort Wayne 138kV Transmission
Line Rebuild Project in Allen and Putnam
Counties, Ohio.

- National Hydrography Dataset (NHD) Stream
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- Soils
- National Wetland Inventory (NWI)**
- Riverine
- Sample Point**
- Upland

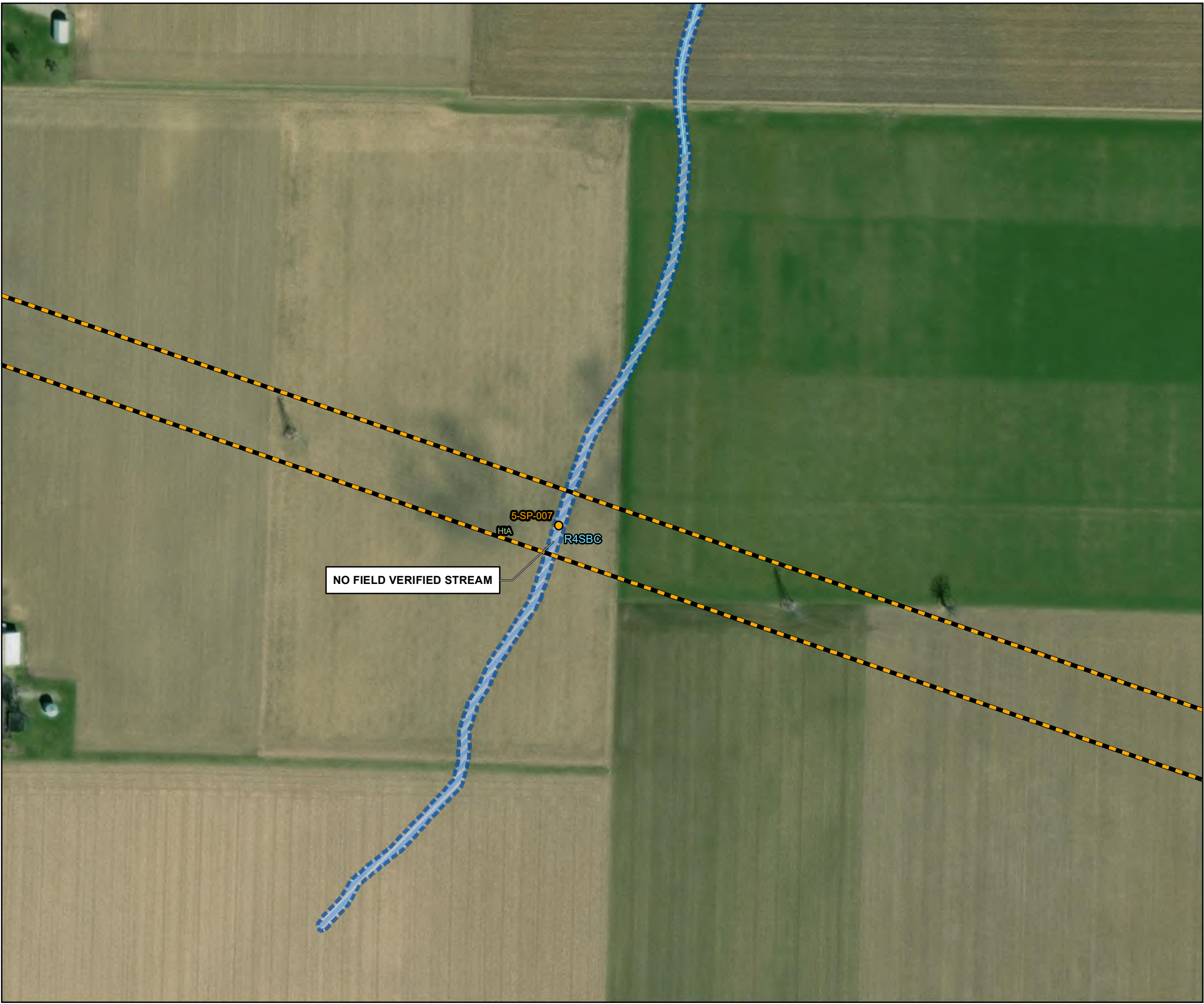


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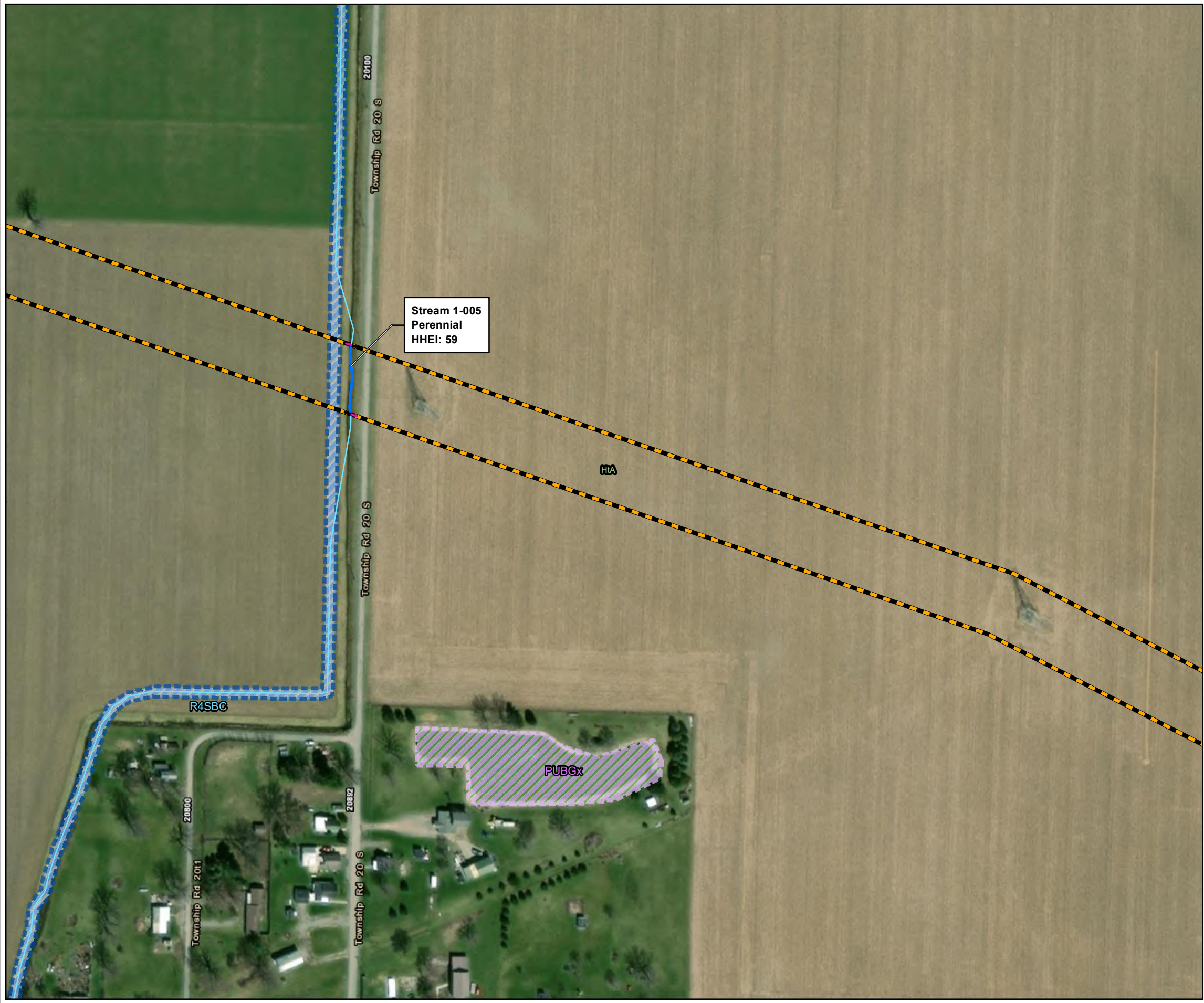
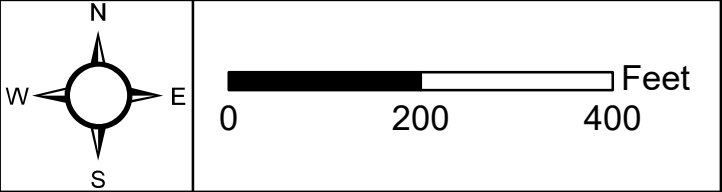
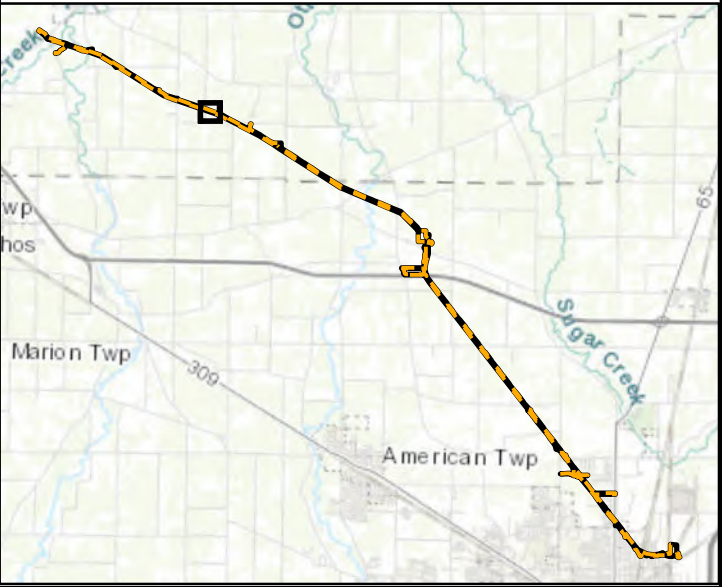


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 10 of 46

- Resource Continues Off-Site
- Field-Delineated Stream
- National Hydrography Dataset (NHD) Stream
- Area of Investigation (AOI)
- Soils
- National Wetland Inventory (NWI)**
 - Freshwater Pond
 - Riverine



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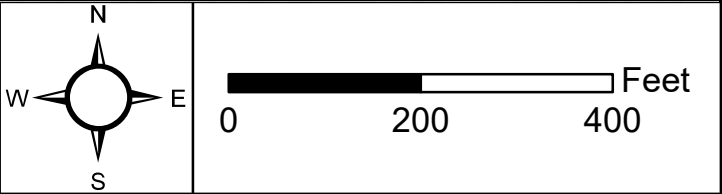
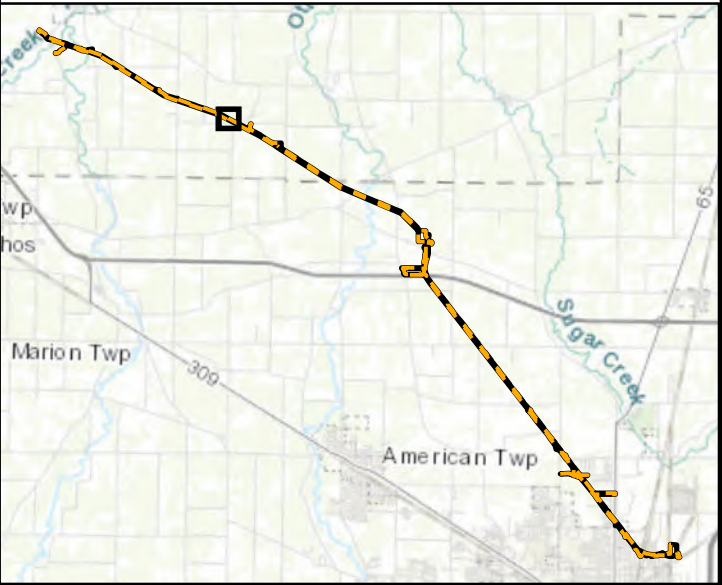
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 11 of 46

- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils



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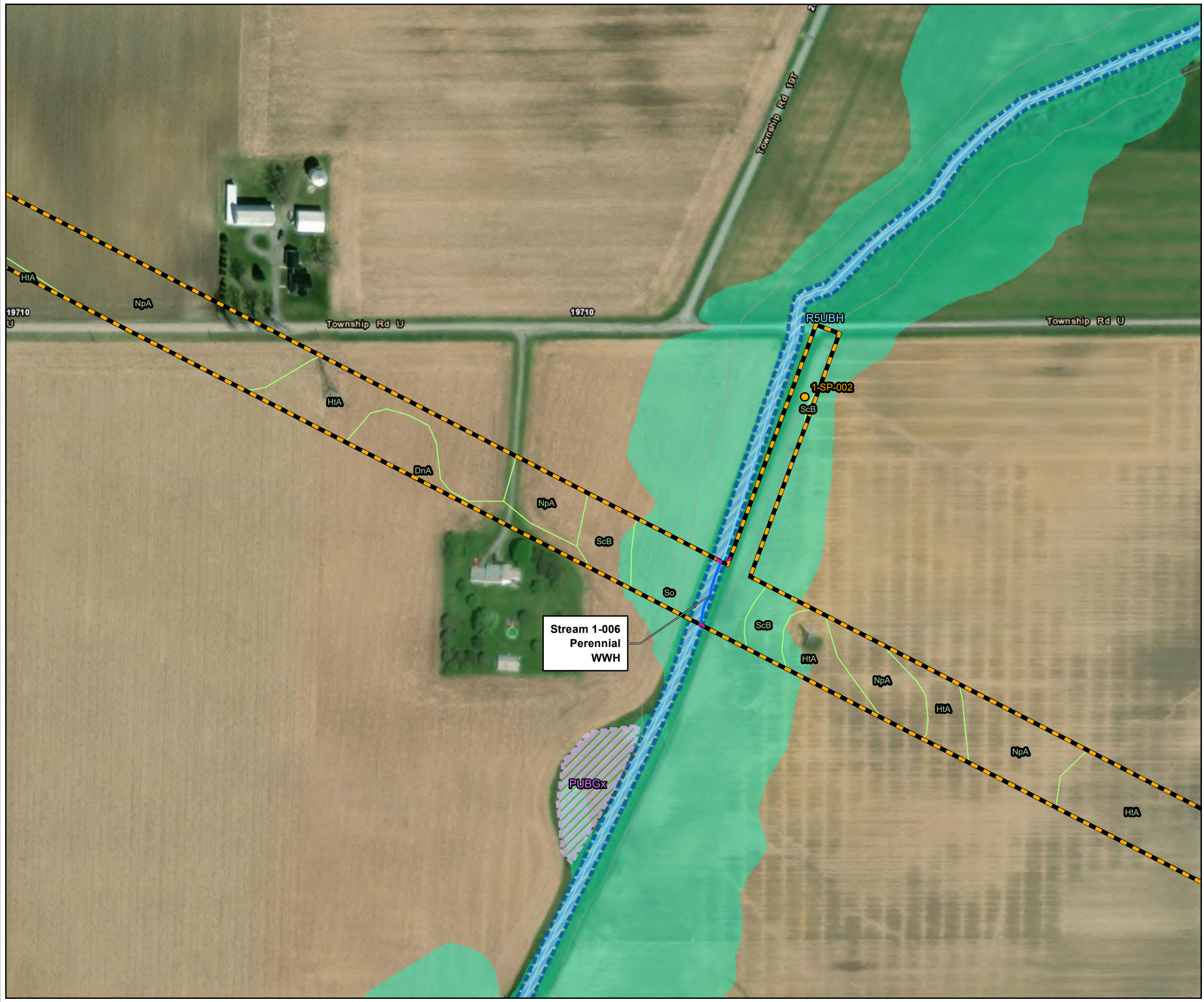
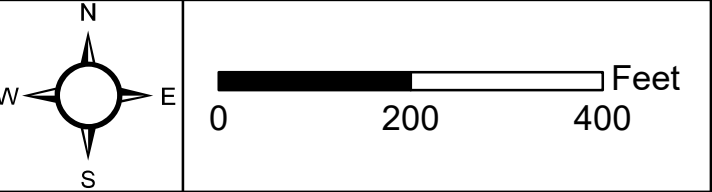
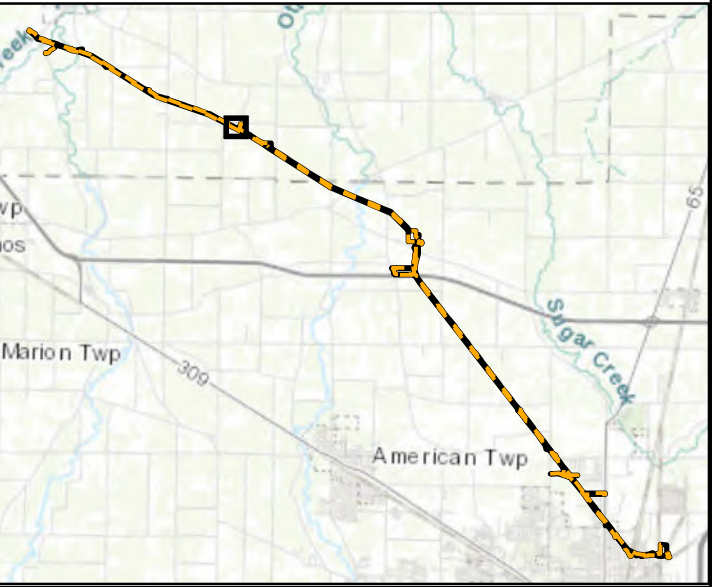


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

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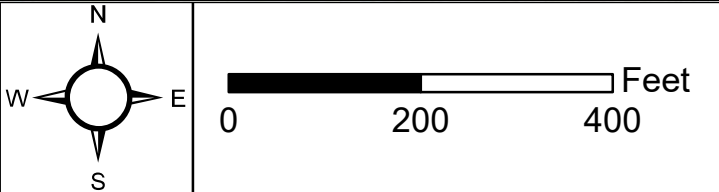
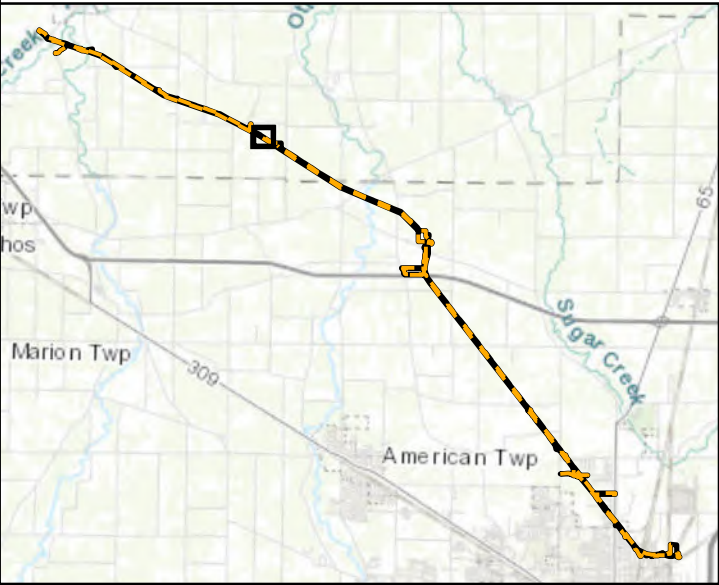
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 13 of 46

-  Area of Investigation (AOI)
-  Soils
-  Field-Delineated Pond
- Field-Delineated Wetland**
-  PSS
- National Wetland Inventory (NWI)**
-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland



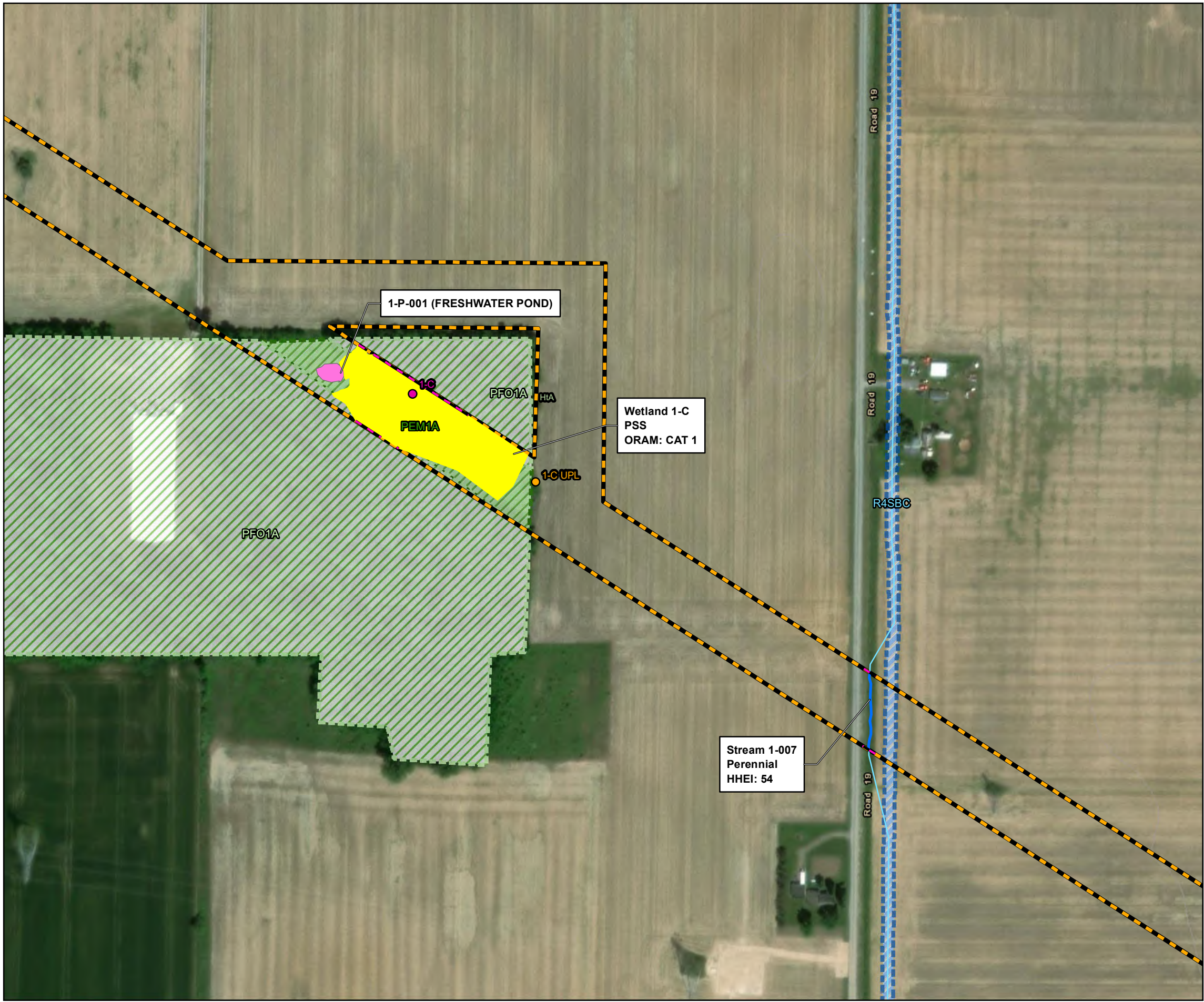
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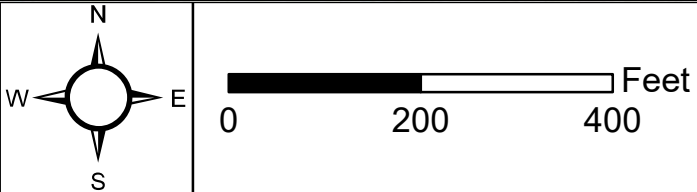
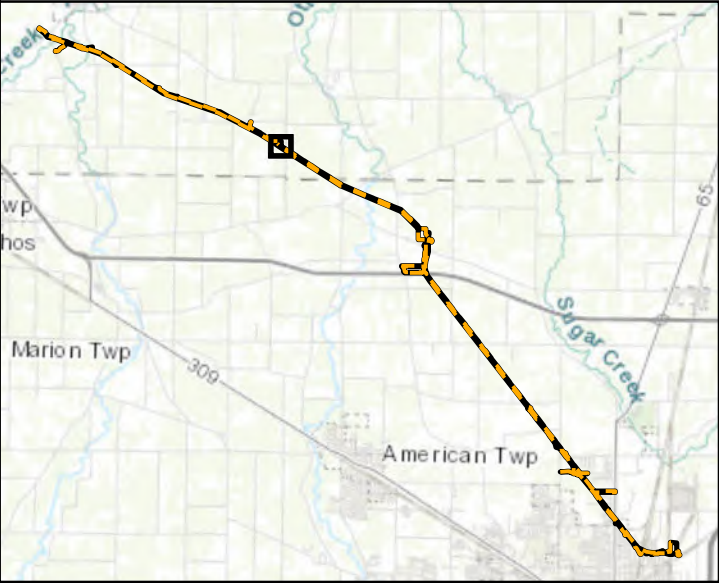
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.



- Resource Continues Off-Site
- Field-Delineated Stream
- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- Field-Delineated Pond
- Field-Delineated Wetland**
- PSS
- National Wetland Inventory (NWI)**
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Riverine
- Sample Point**
- Upland
- Wetland



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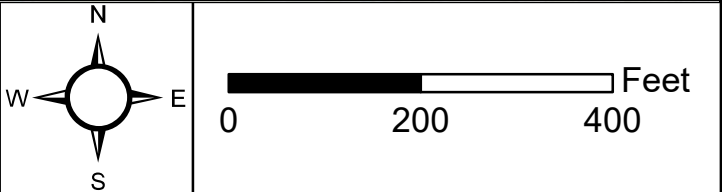
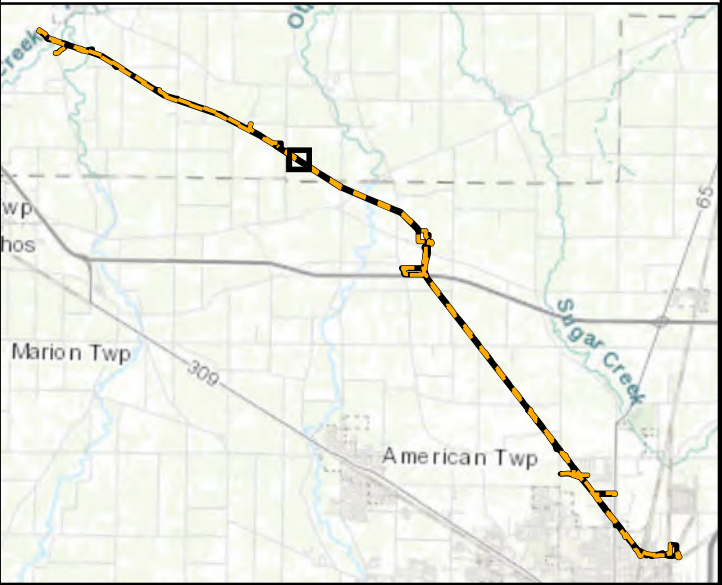
Project No. 1730



Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 15 of 46

- Resource Continues Off-Site
- Field-Delineated Stream
- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- National Wetland Inventory (NWI)**
 - Freshwater Forested/Shrub Wetland
 - Riverine



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
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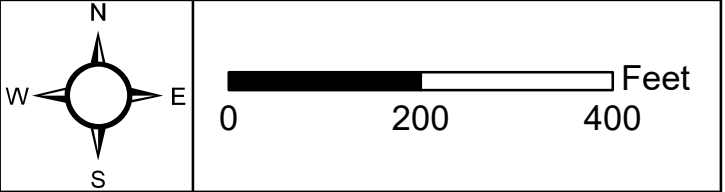
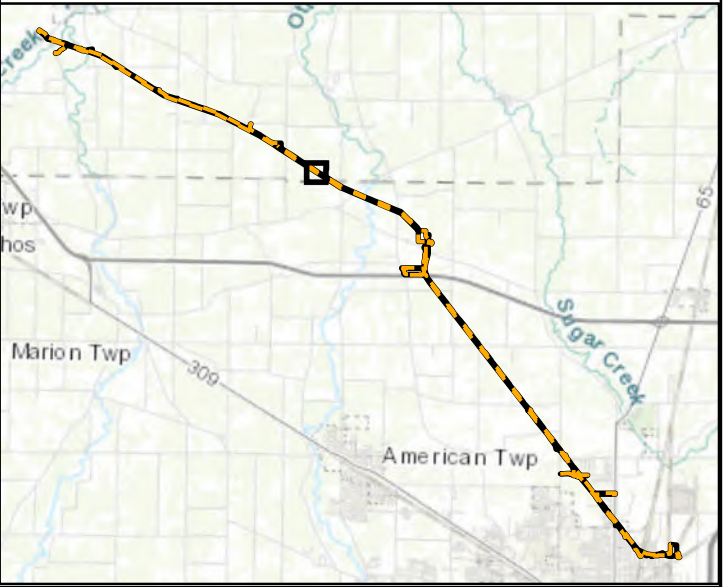
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 16 of 46

- Resource Continues Off-Site
- Field-Delineated Stream
- Area of Investigation (AOI)
- Soils
- National Wetland Inventory (NWI)**
- Freshwater Forested/Shrub Wetland



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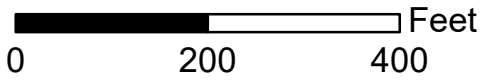
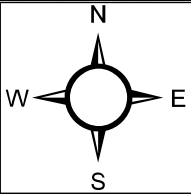
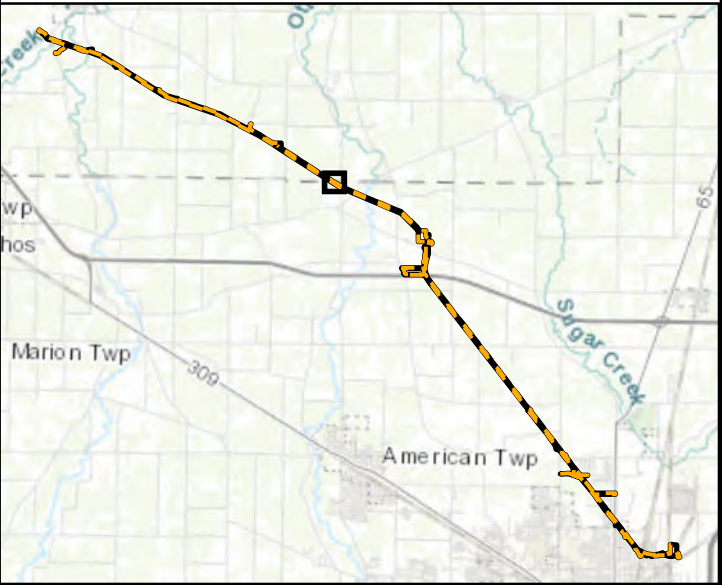
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 17 of 46

- Area of Investigation (AOI)
- Soils
- FEMA 100-Year Floodplain
- Sample Point**
 - Upland



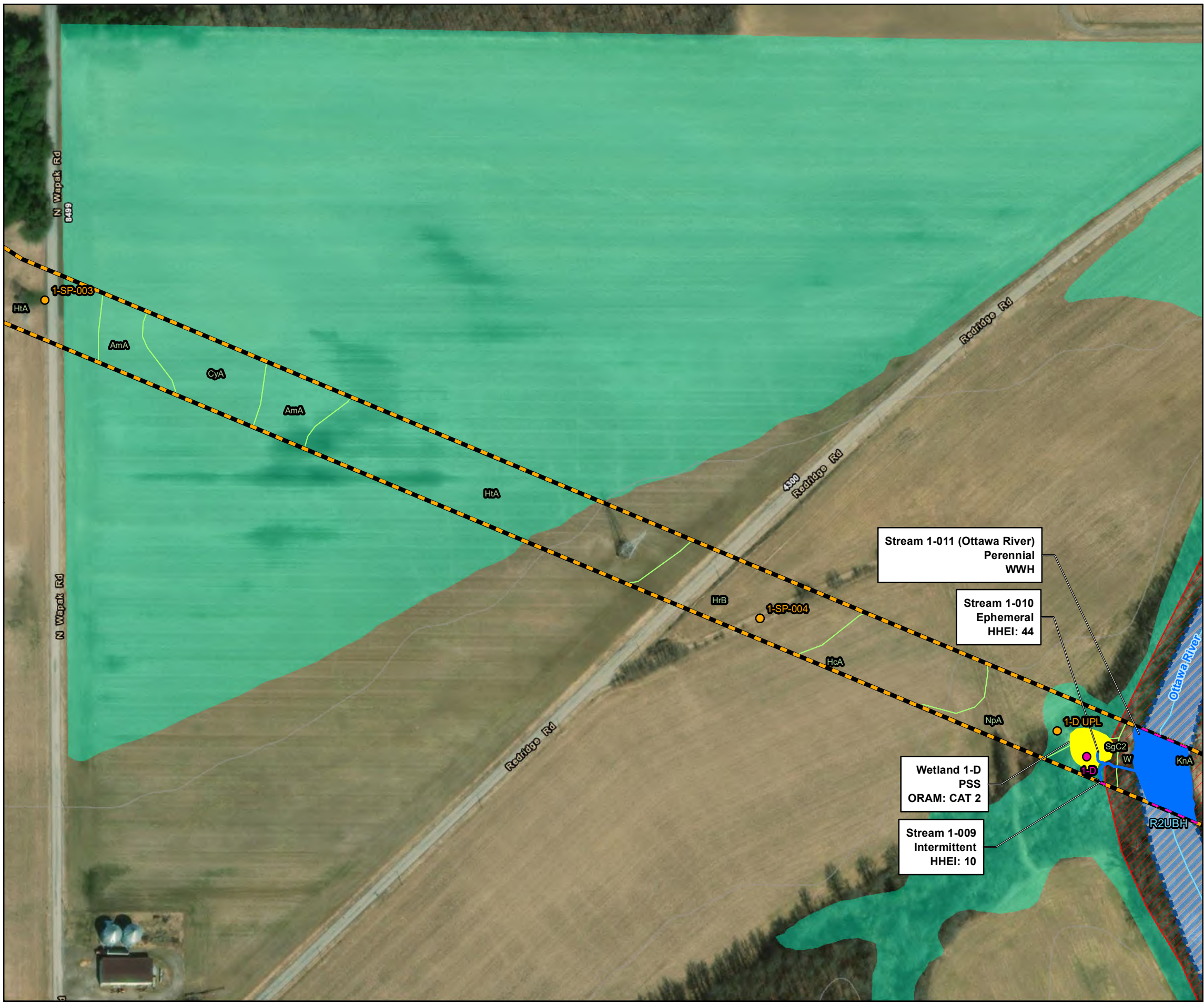
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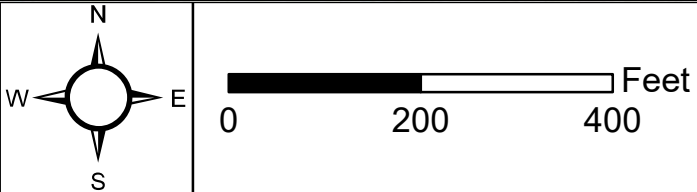
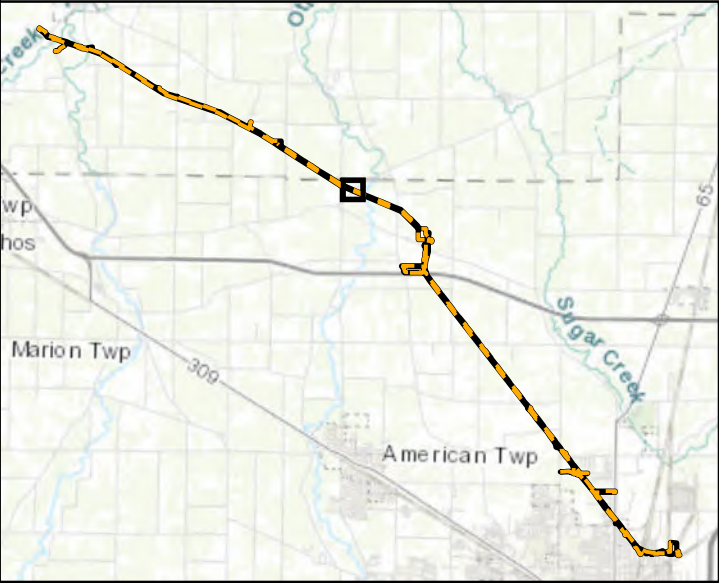
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.



- Resource Continues Off-Site
- Field-Delineated Stream
- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA Floodway
- FEMA 100-Year Floodplain
- Field-Delineated Wetland
 - PSS
- National Wetland Inventory (NWI)
 - Riverine
- Sample Point
 - Upland
 - Wetland



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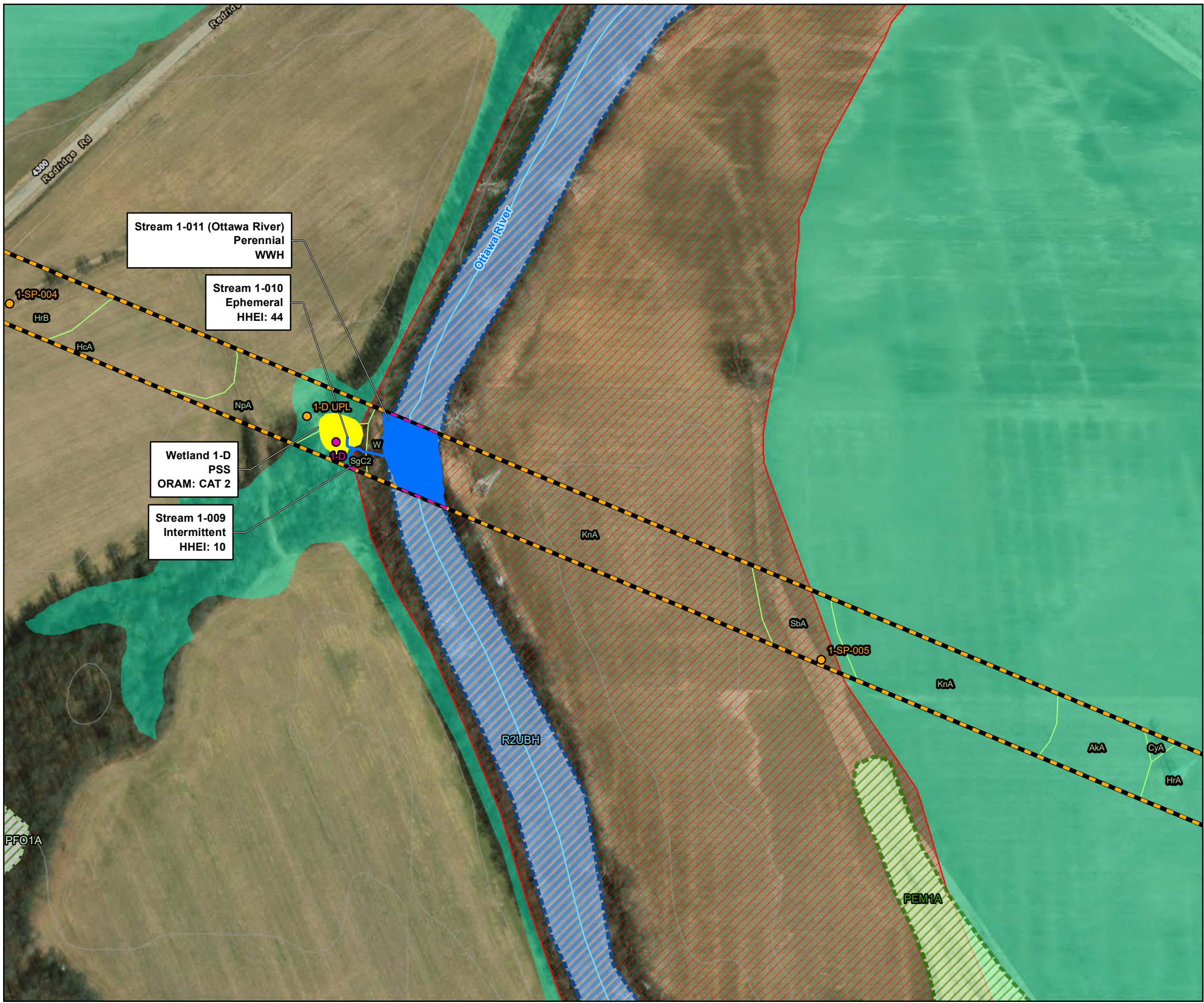
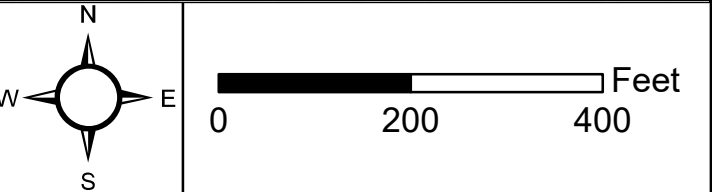
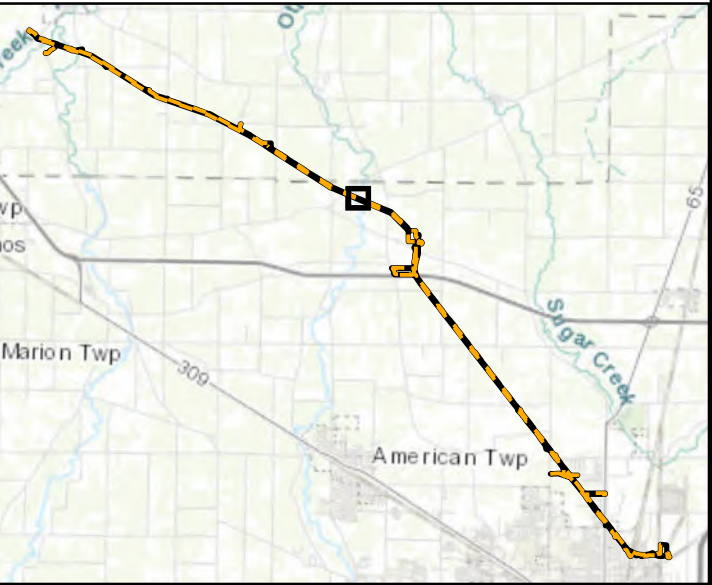


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

- Resource Continues Off-Site
- Field-Delineated Stream
- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA Floodway
- FEMA 100-Year Floodplain
- Field-Delineated Wetland**
 - PSS
- National Wetland Inventory (NWI)**
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Riverine
- Sample Point**
 - Upland
 - Wetland



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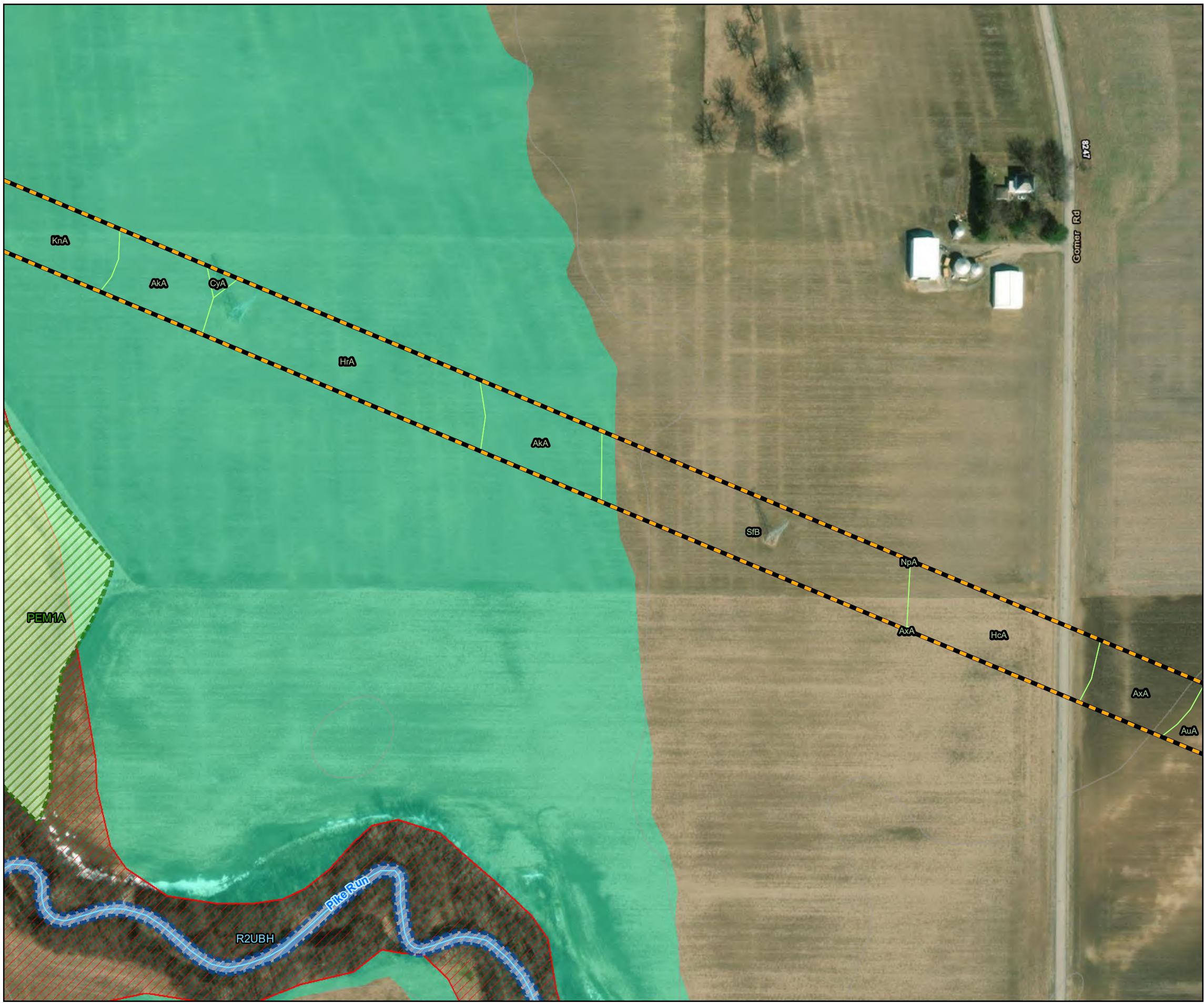
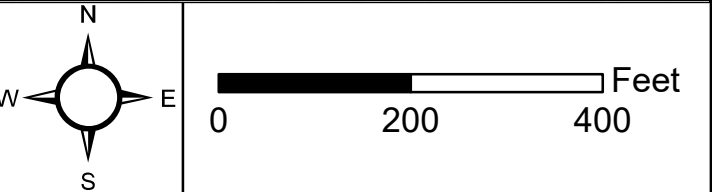
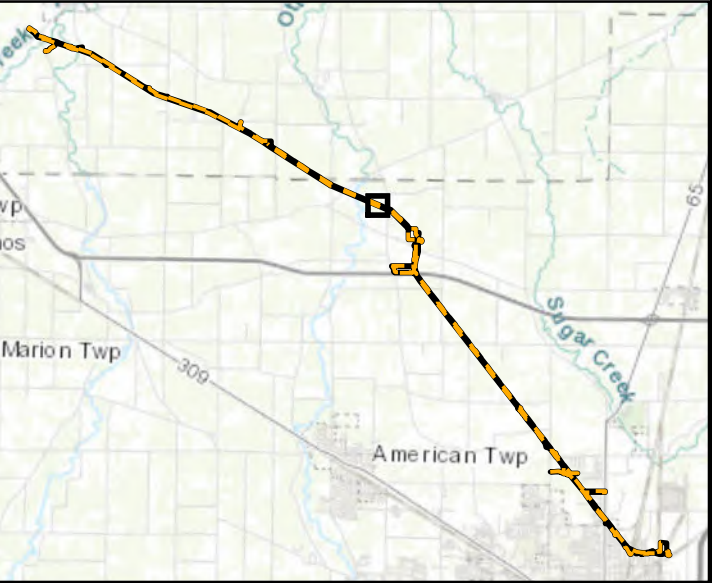


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA Floodway
- FEMA 100-Year Floodplain
- National Wetland Inventory (NWI)**
 - Freshwater Emergent Wetland
 - Riverine



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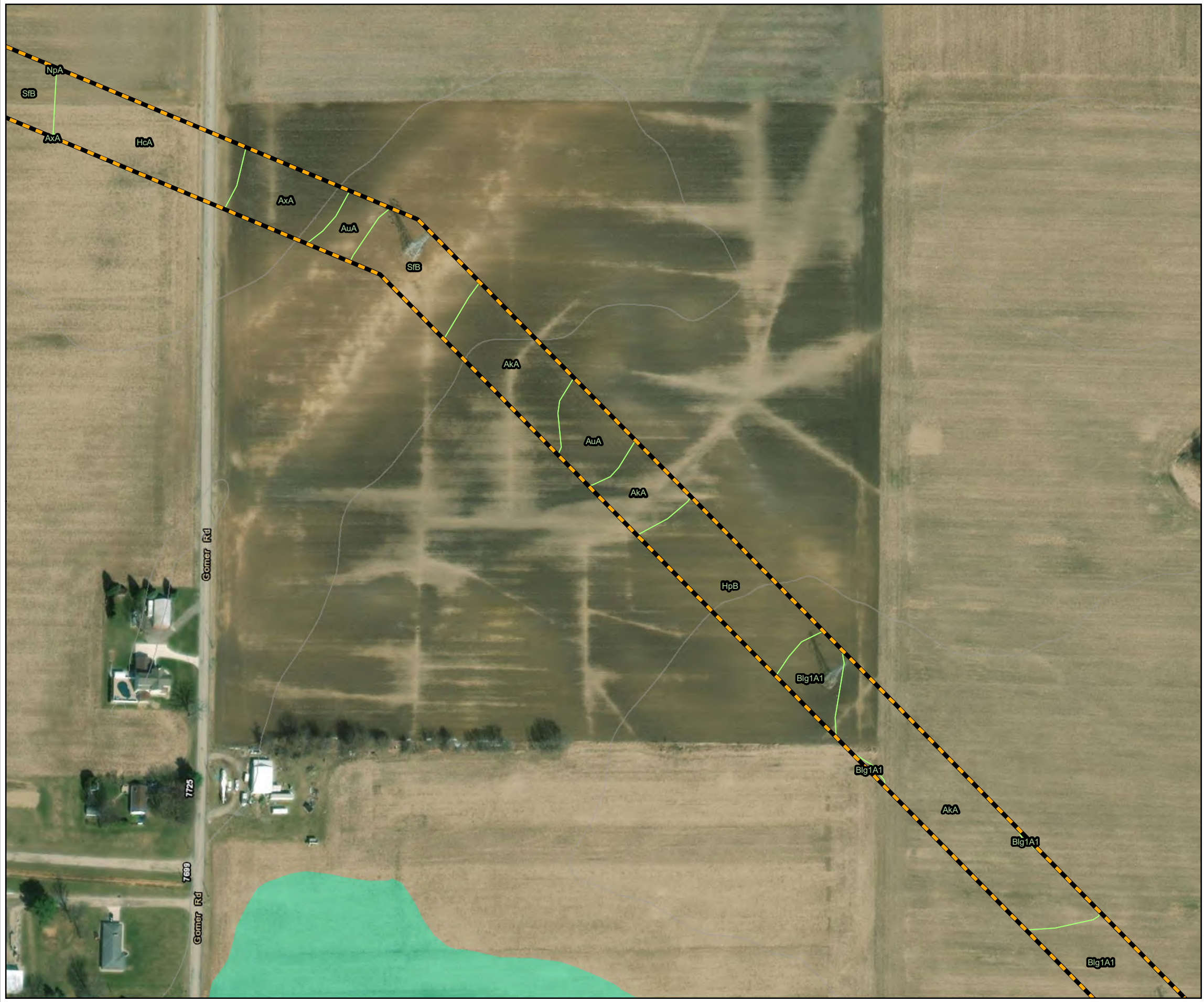
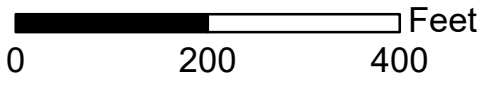
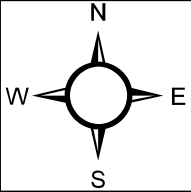
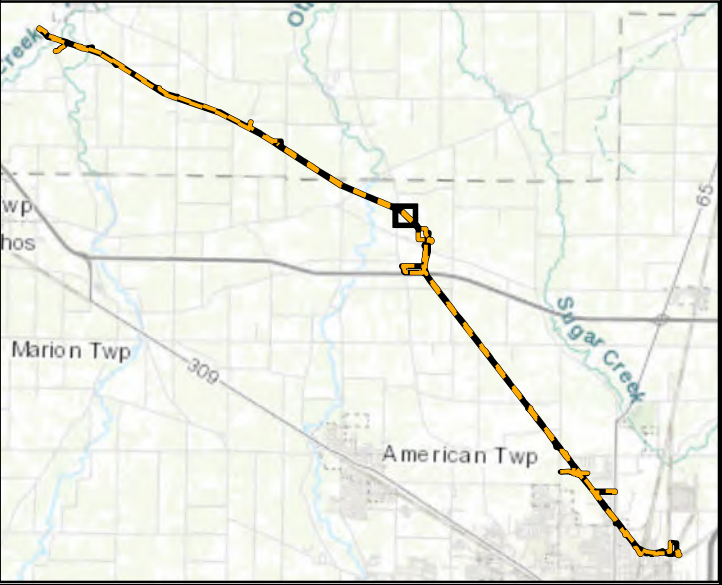


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 21 of 46

- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA 100-Year Floodplain



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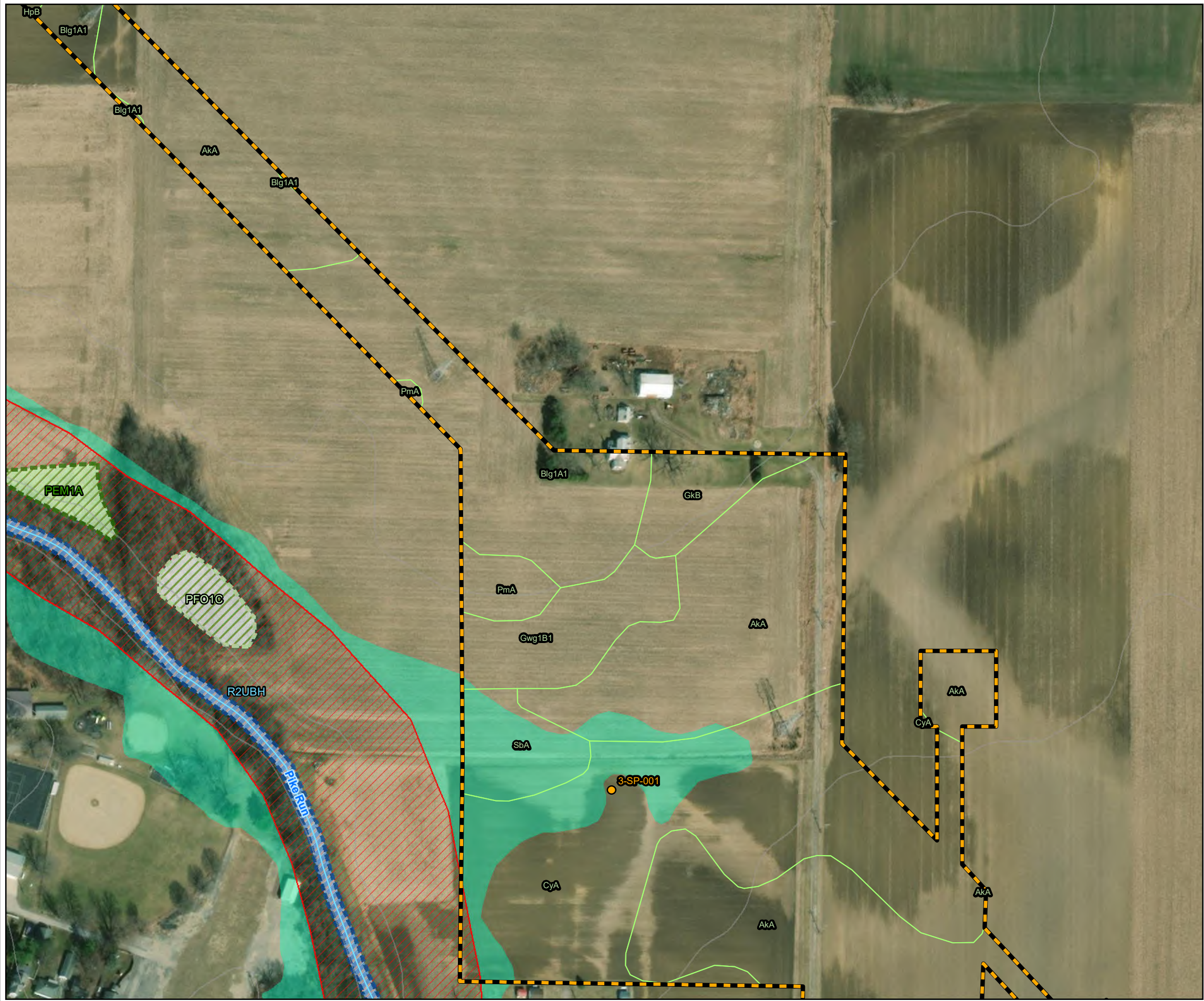
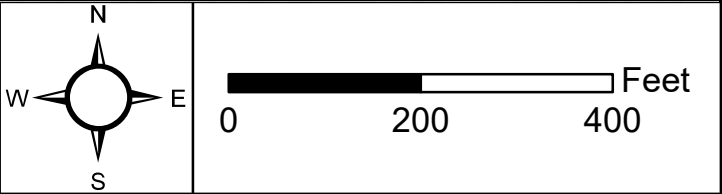
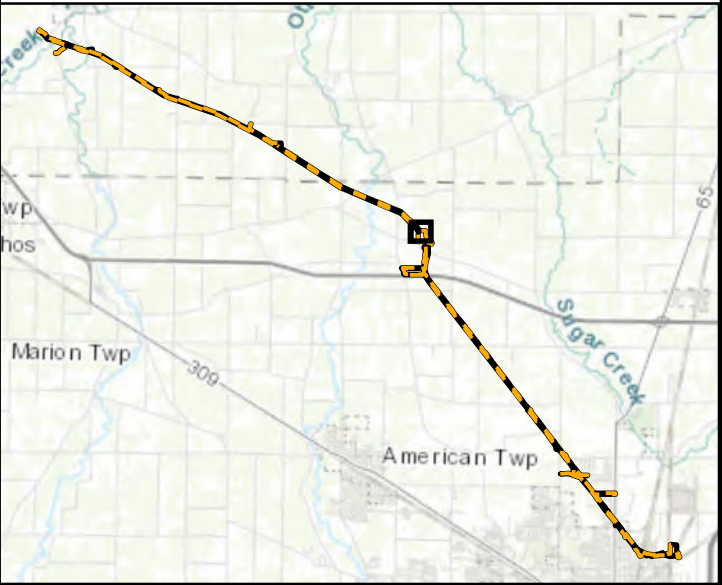


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 22 of 46

- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA Floodway
- FEMA 100-Year Floodplain
- National Wetland Inventory (NWI)**
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Riverine
- Sample Point**
 - Upland



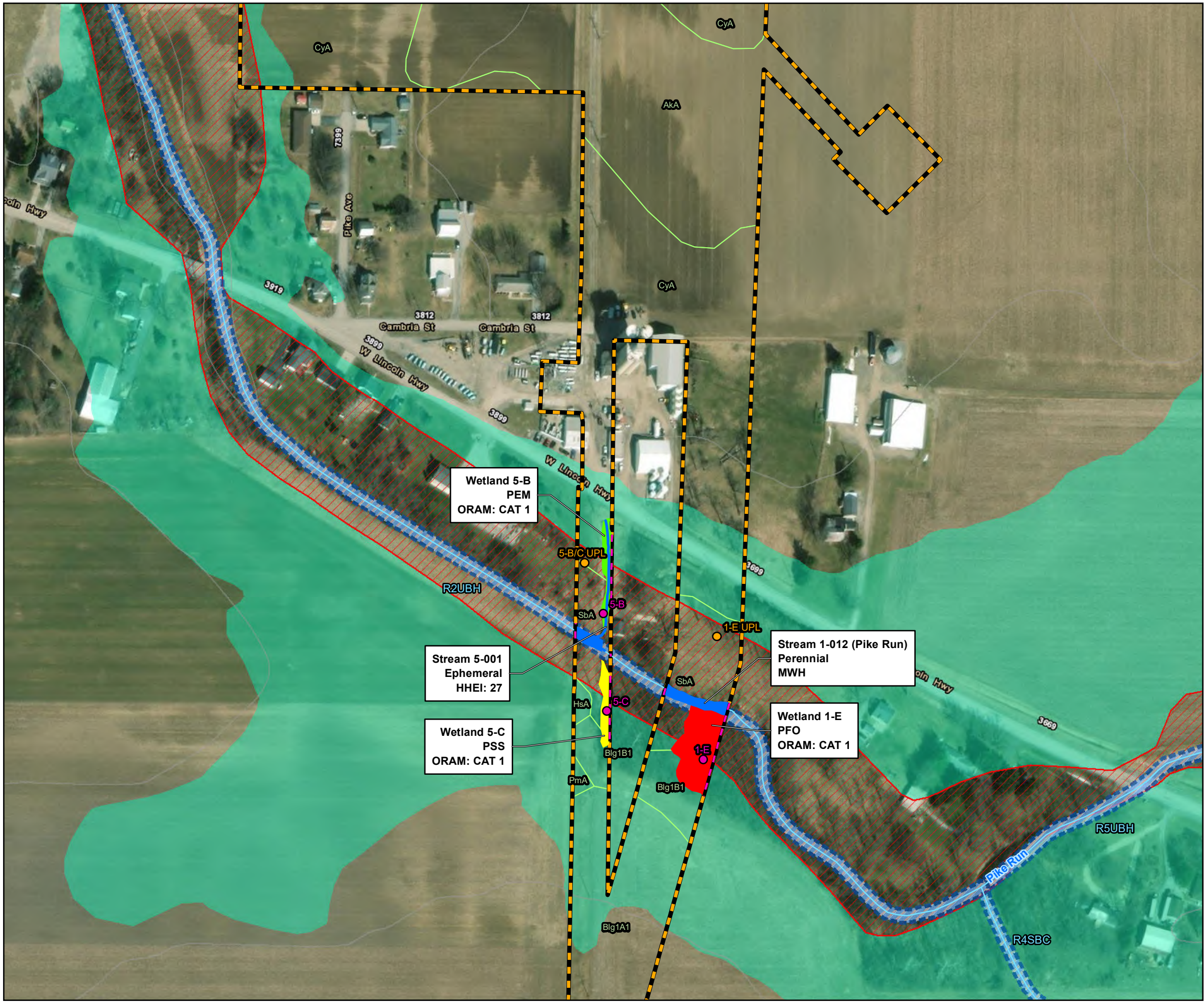
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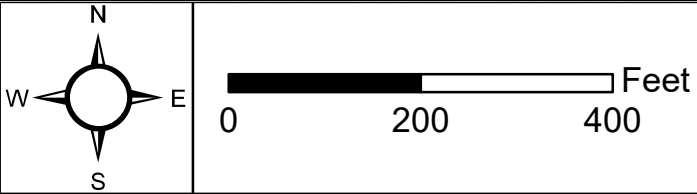
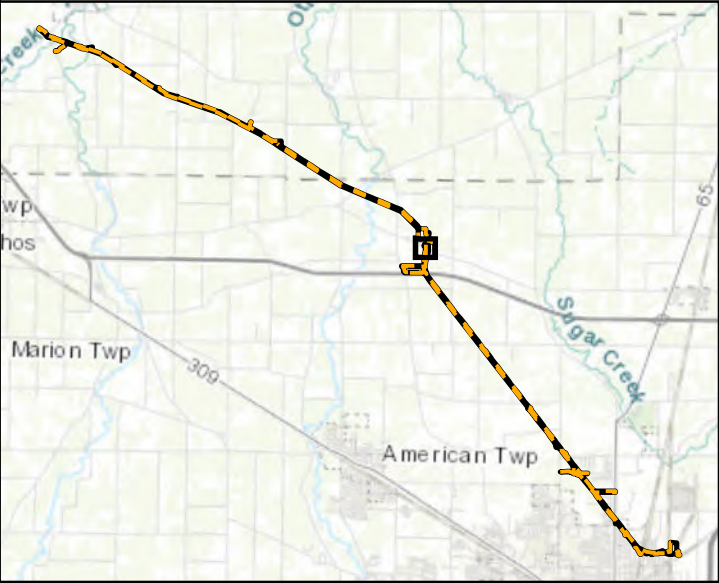
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.



- Resource Continues Off-Site
- Field-Delineated Stream
- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA Floodway
- FEMA 100-Year Floodplain
- Field-Delineated Wetland**
- PEM
- PSS
- PFO
- National Wetland Inventory (NWI)**
- Riverine
- Sample Point**
- Upland
- Wetland



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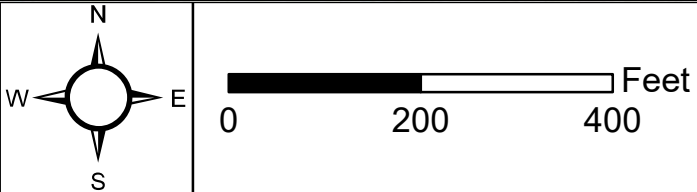
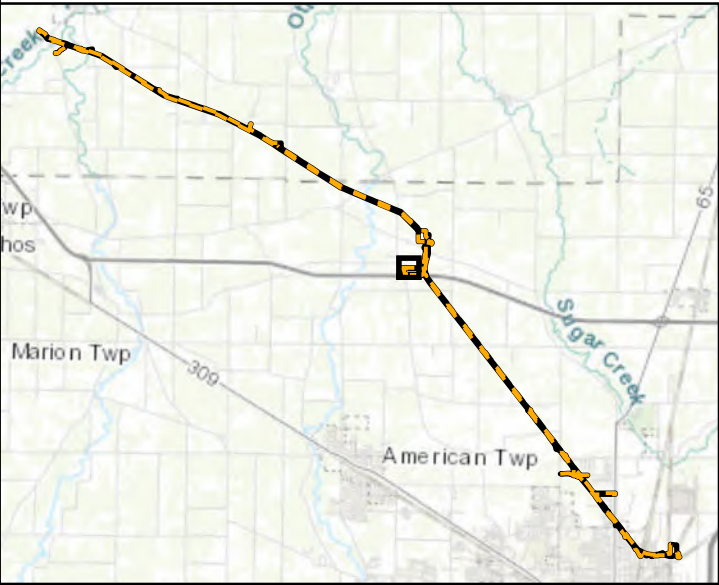
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 24 of 46

- Culvert Location
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA 100-Year Floodplain



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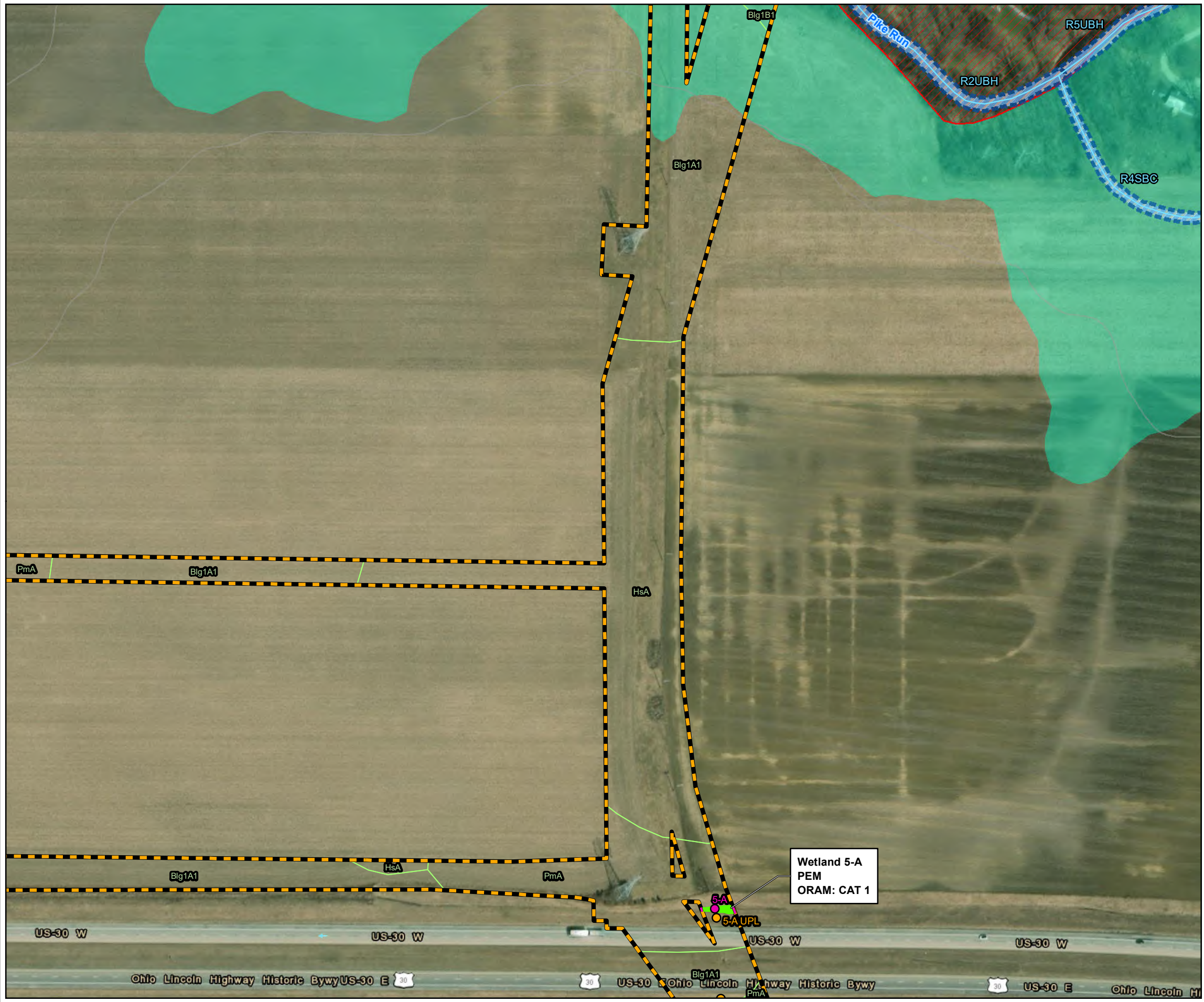
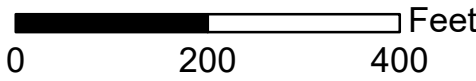
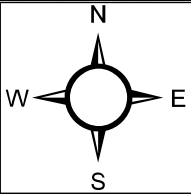
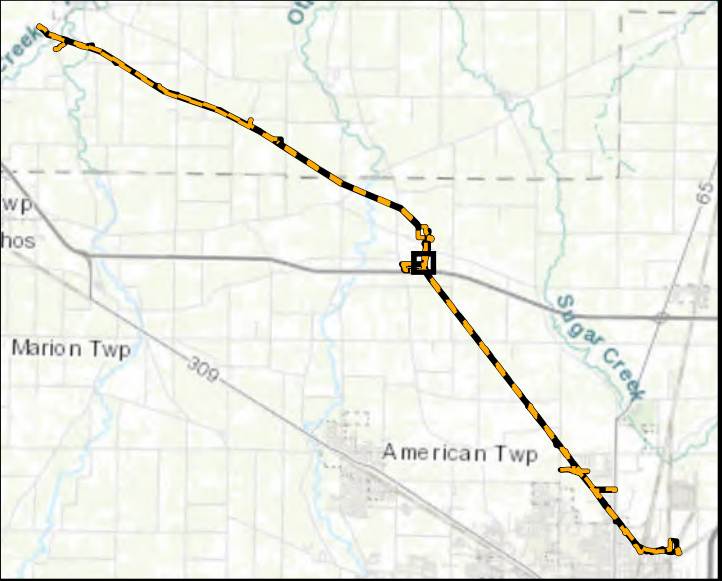


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

- Resource Continues Off-Site
- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA Floodway
- FEMA 100-Year Floodplain
- Field-Delineated Wetland**
- PEM
- National Wetland Inventory (NWI)**
- Riverine
- Sample Point**
- Upland
- Wetland



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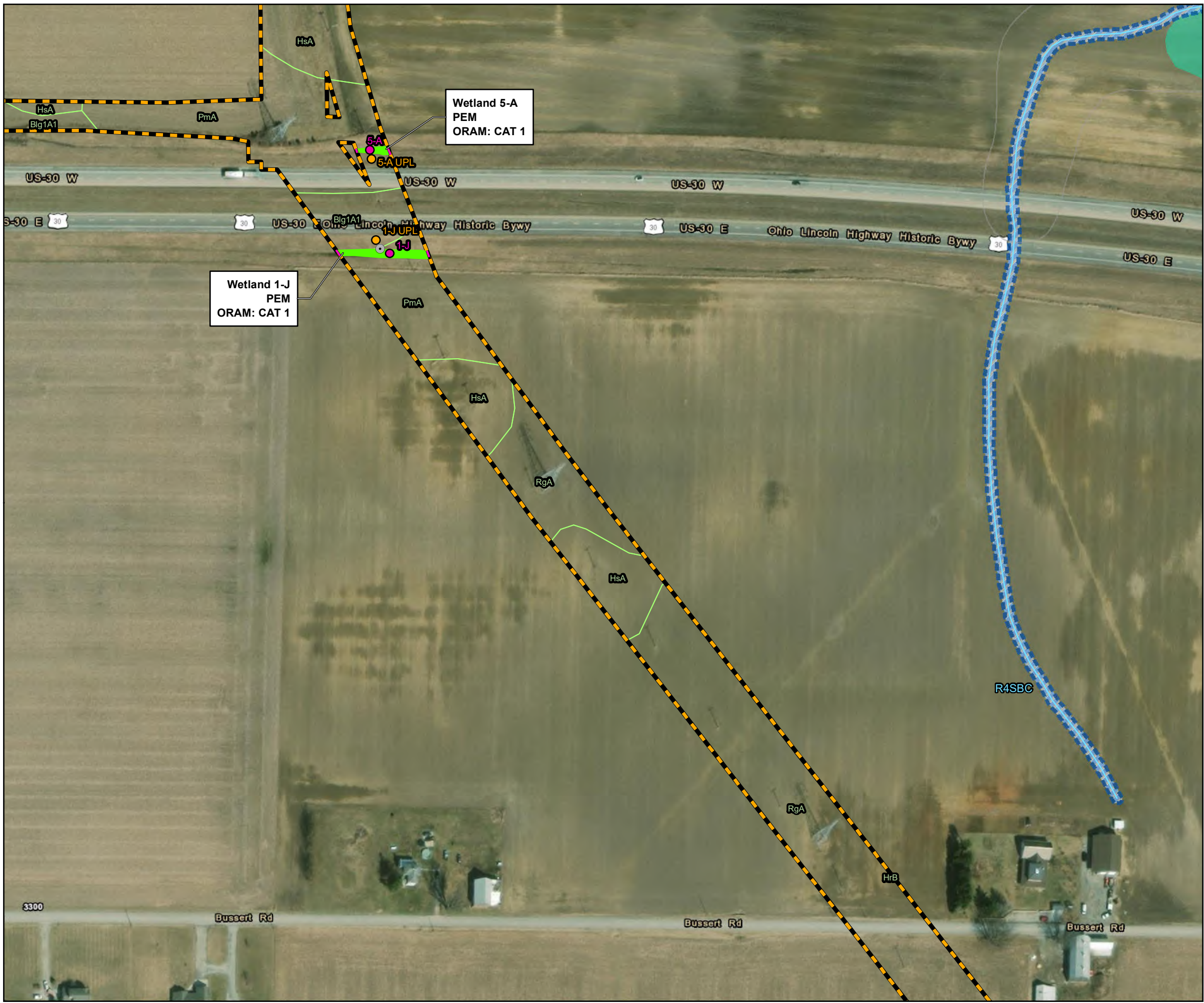
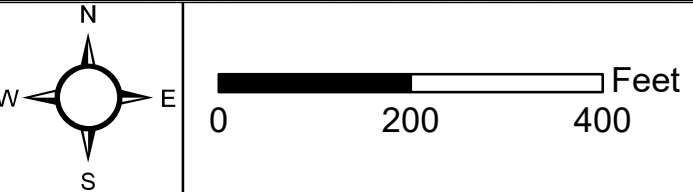
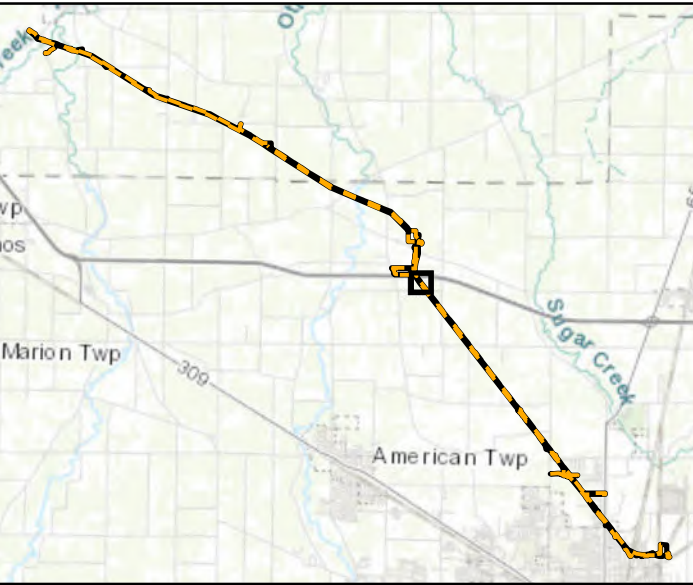


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

- Culvert Location
- Resource Continues Off-Site
- National Hydrography Dataset (NHD) Stream
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA 100-Year Floodplain
- Field-Delineated Wetland**
- PEM
- National Wetland Inventory (NWI)**
- Riverine
- Sample Point**
- Upland
- Wetland



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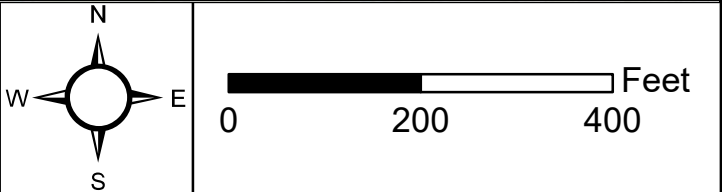
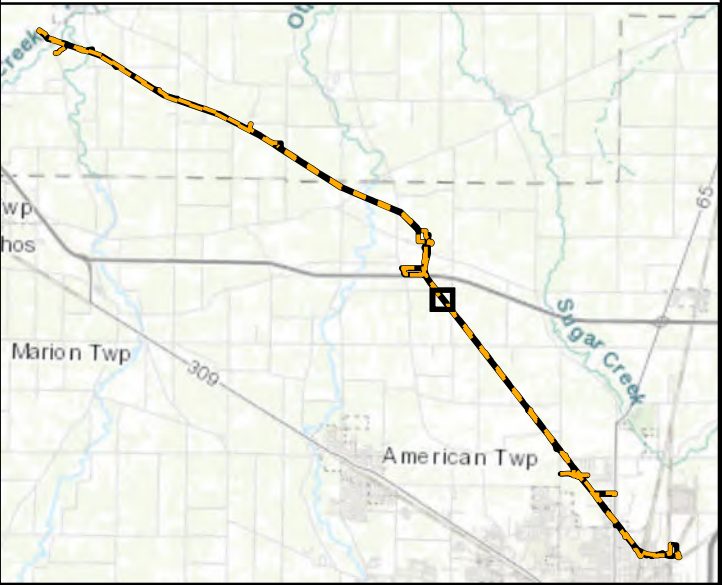
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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 27 of 46

- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils



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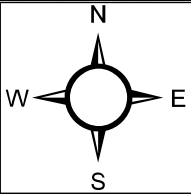
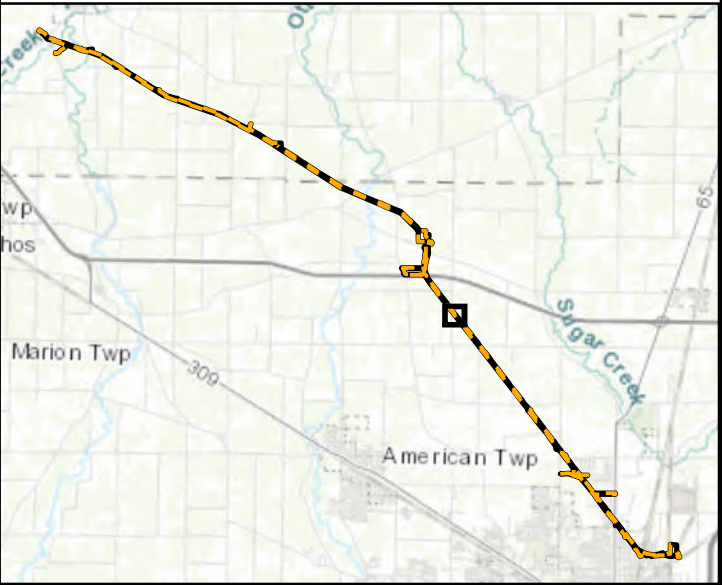
Project No. 1730



Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 28 of 46

- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils



0 200 400 Feet

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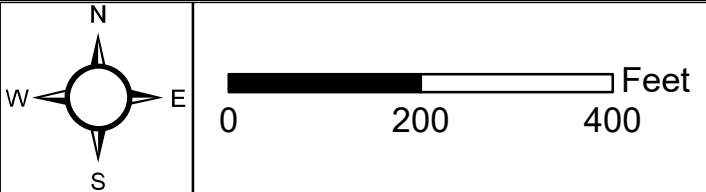
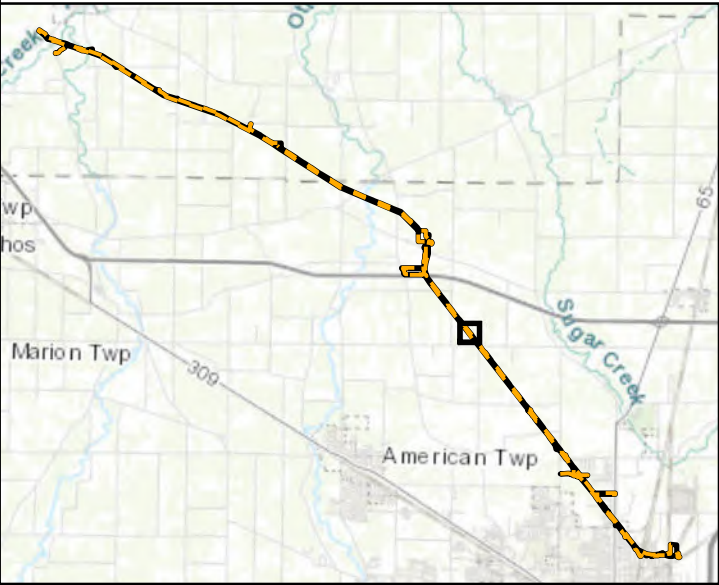
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Project No. 1730



Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA 100-Year Floodplain
- National Wetland Inventory (NWI)**
- Freshwater Pond
- Sample Point**
- Upland



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Project No. 1730

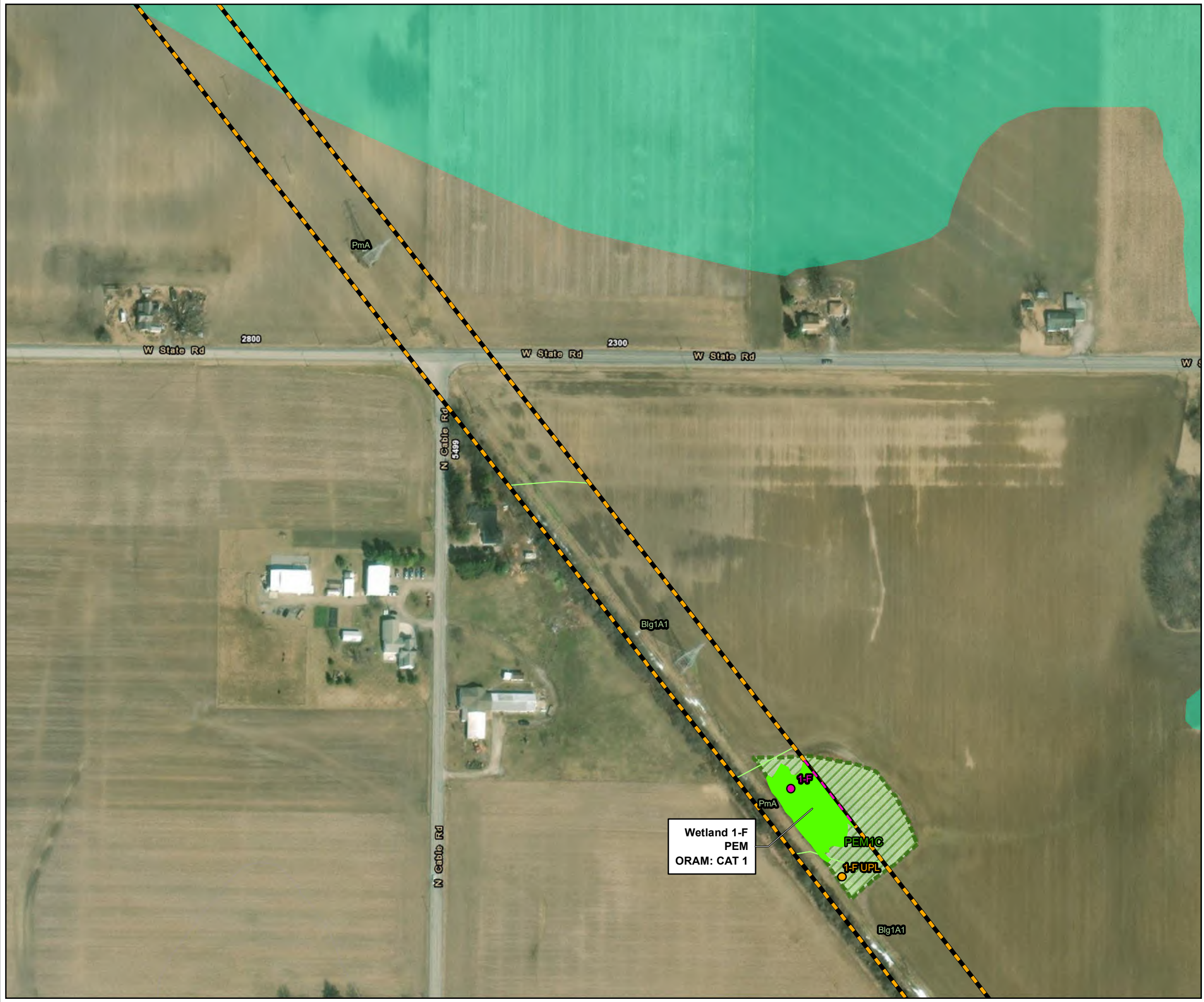
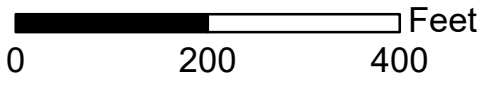
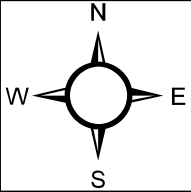
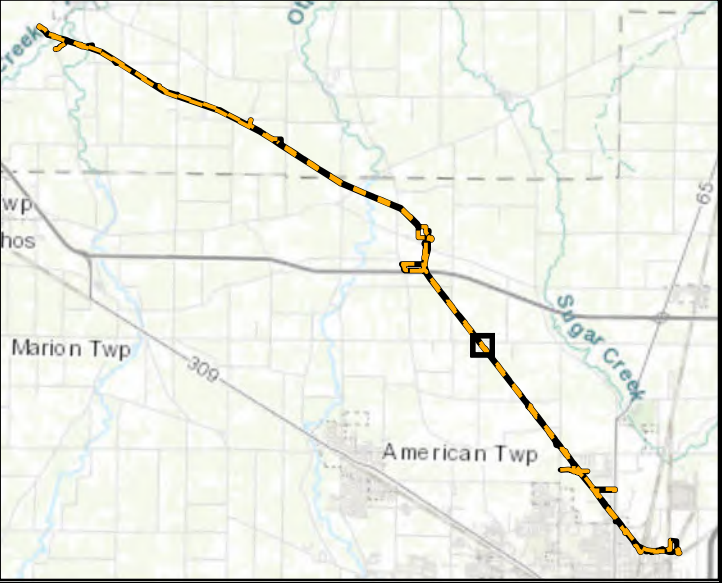


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 30 of 46

- Resource Continues Off-Site
- 5-Foot USGS Contour
- Area of Investigation (AOI)
- Soils
- FEMA 100-Year Floodplain
- Field-Delineated Wetland**
- PEM
- National Wetland Inventory (NWI)**
- Freshwater Emergent Wetland
- Sample Point**
- Upland
- Wetland



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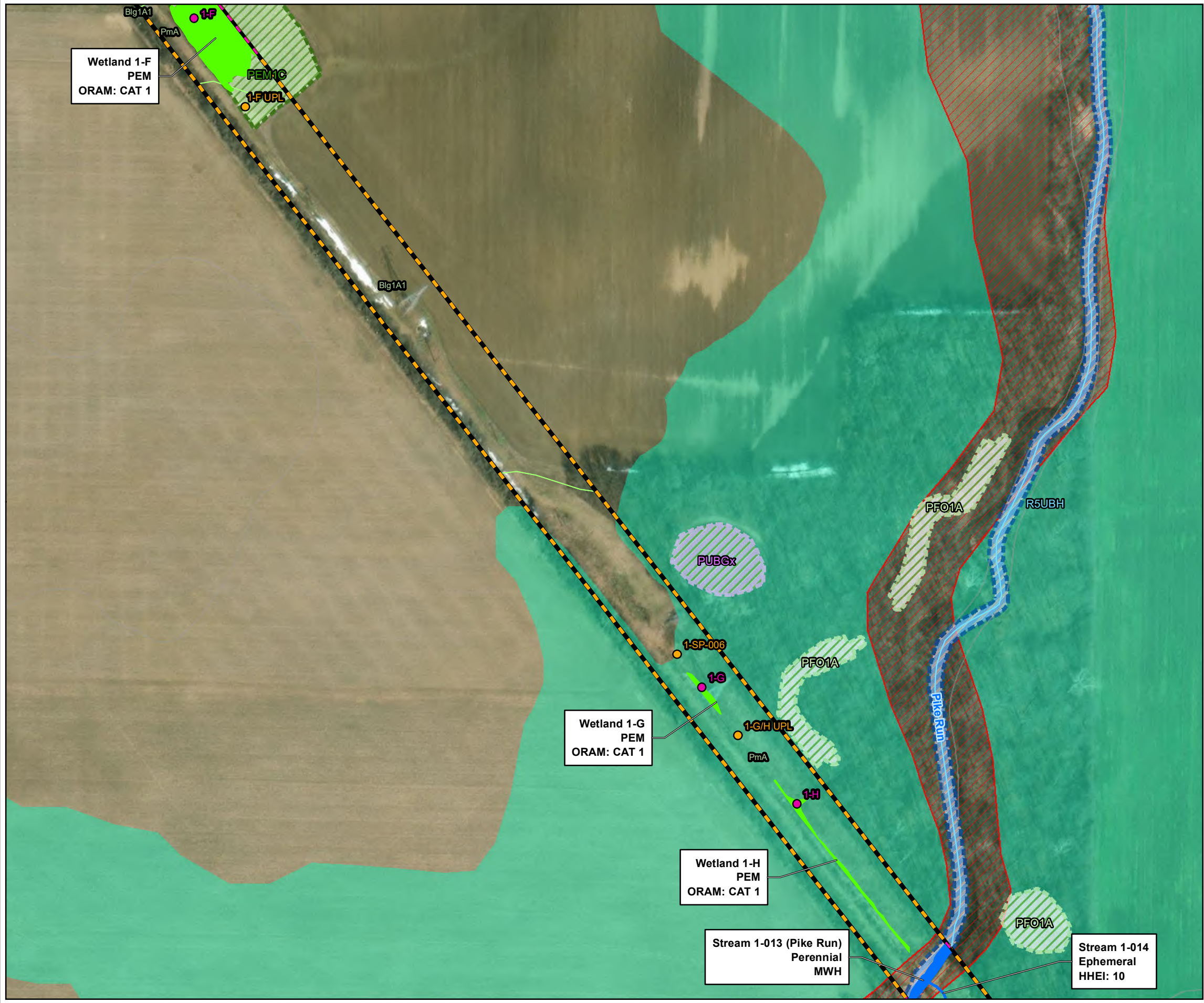
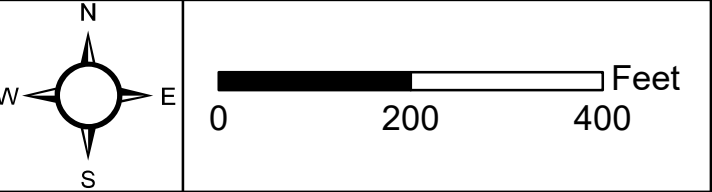
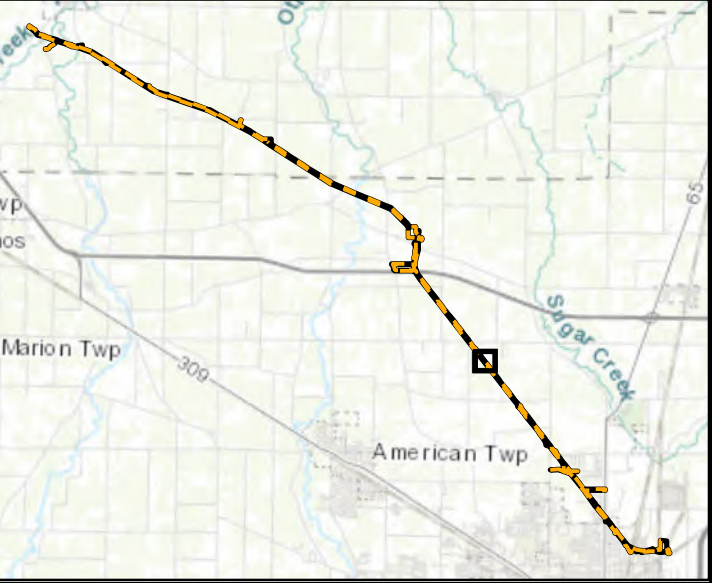


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

- Resource Continues Off-Site
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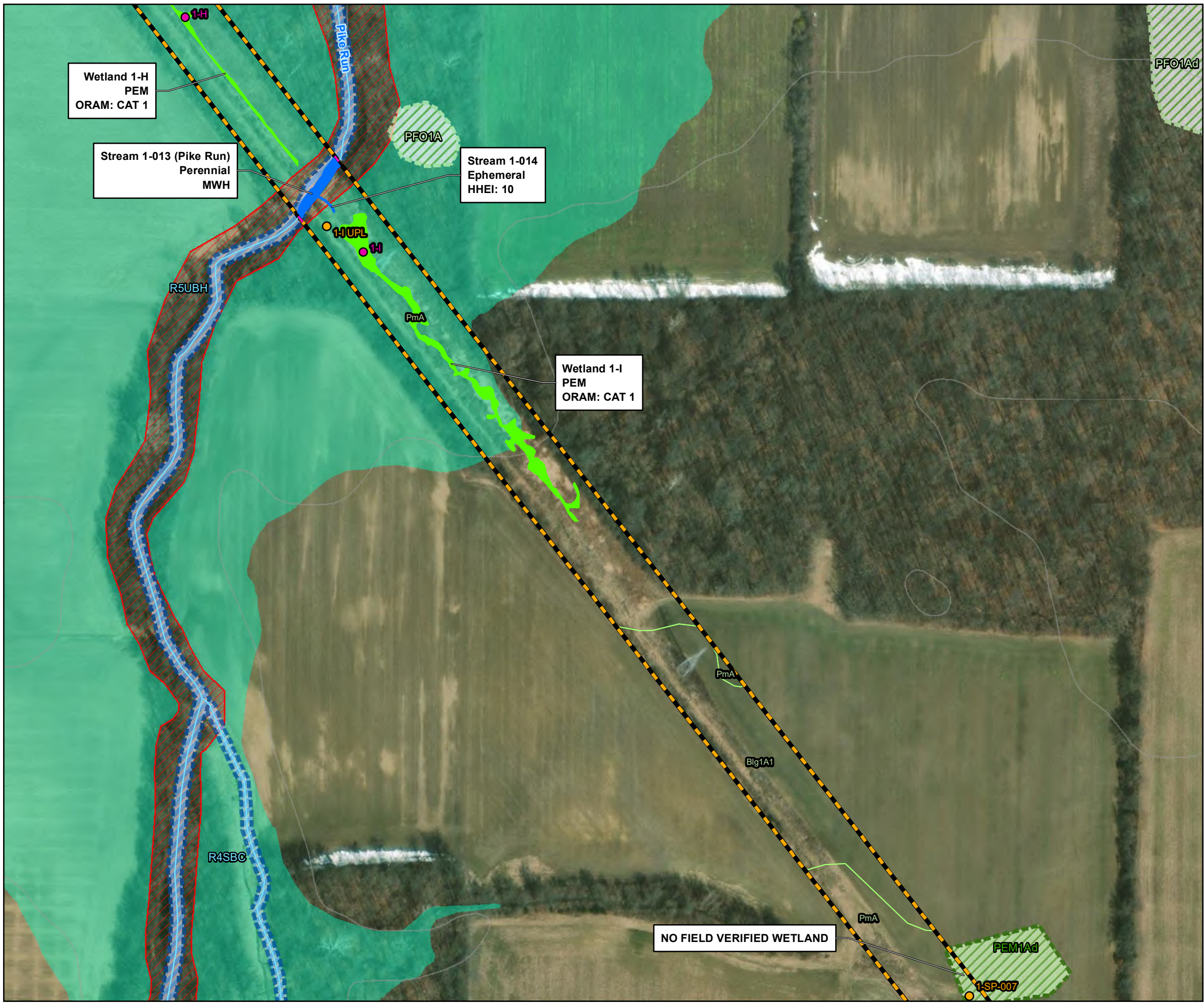
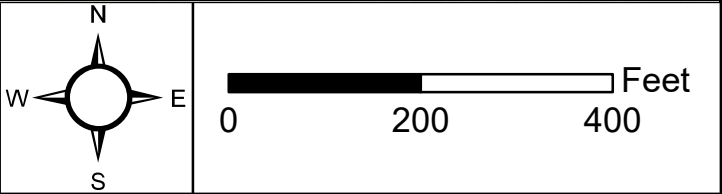
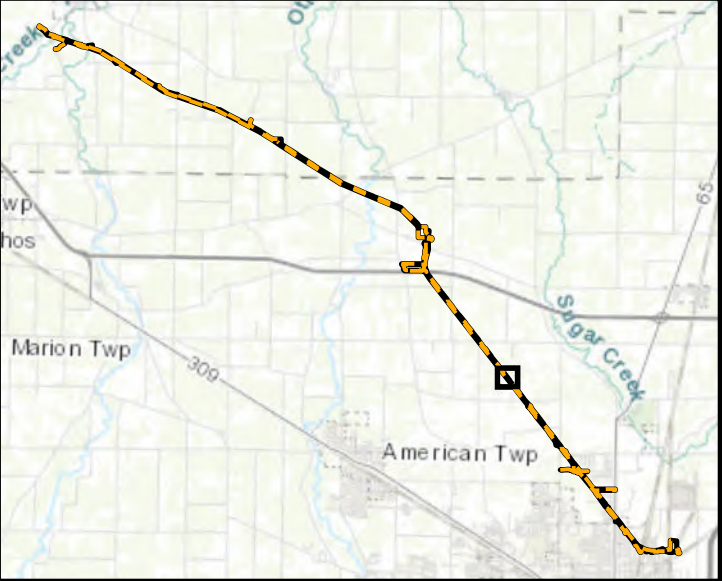


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

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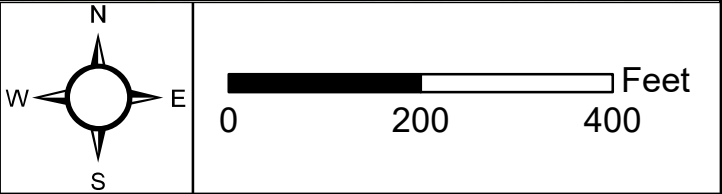
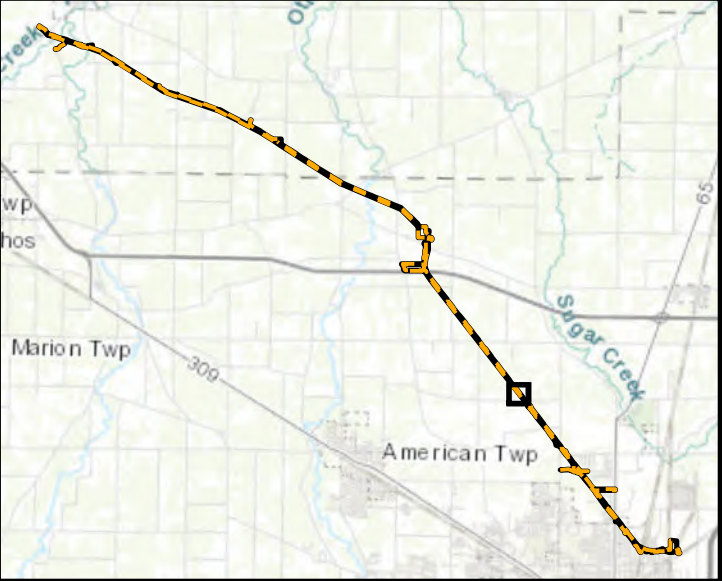


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Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

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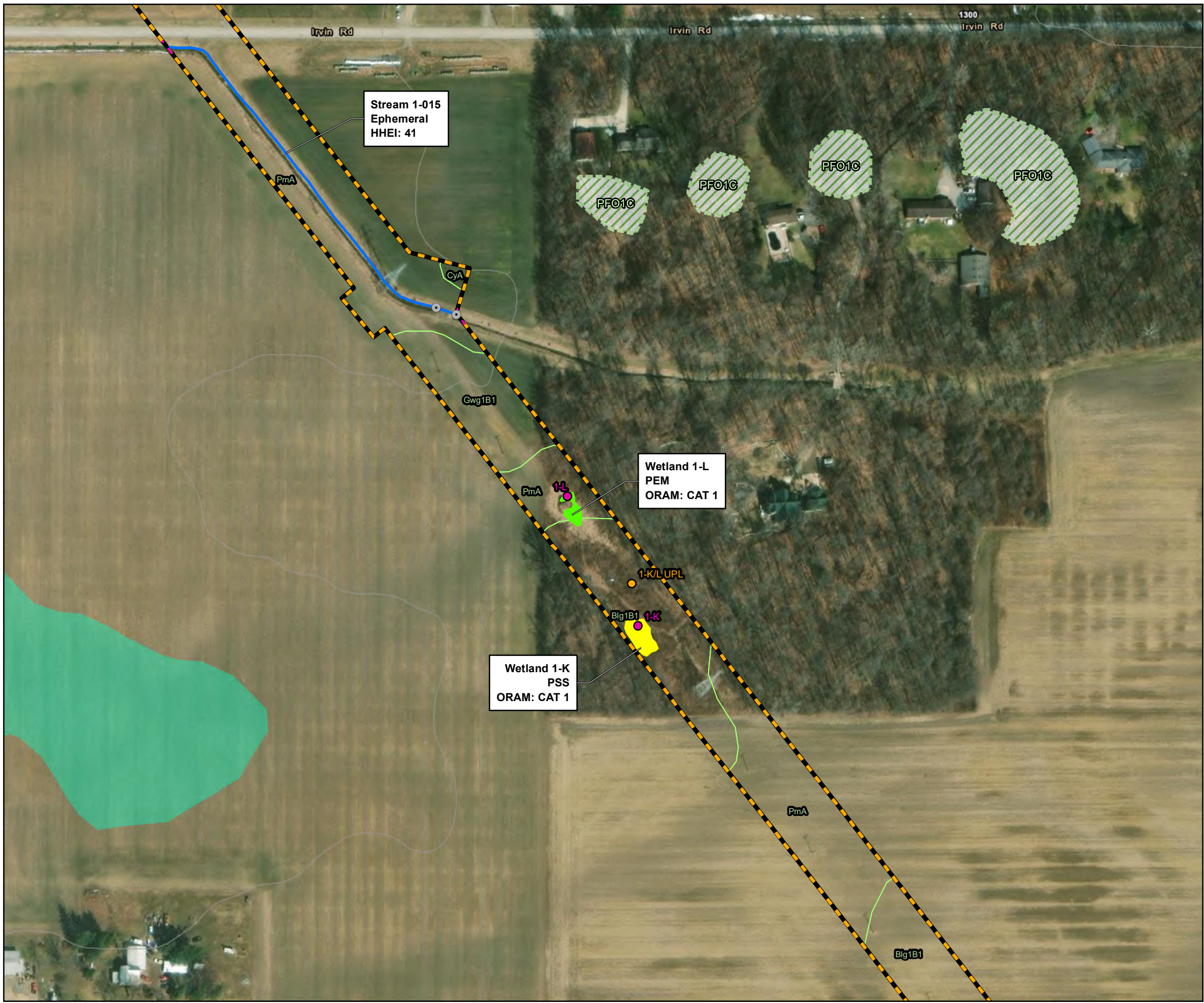
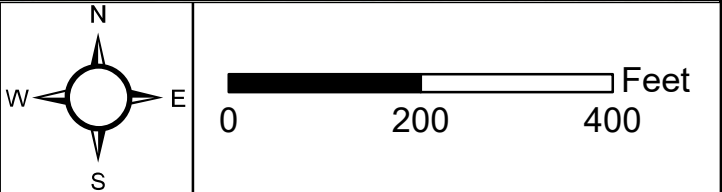
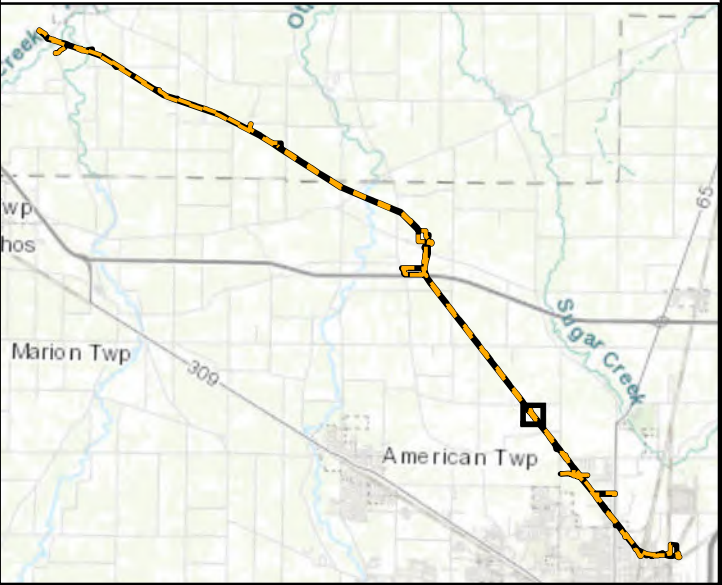


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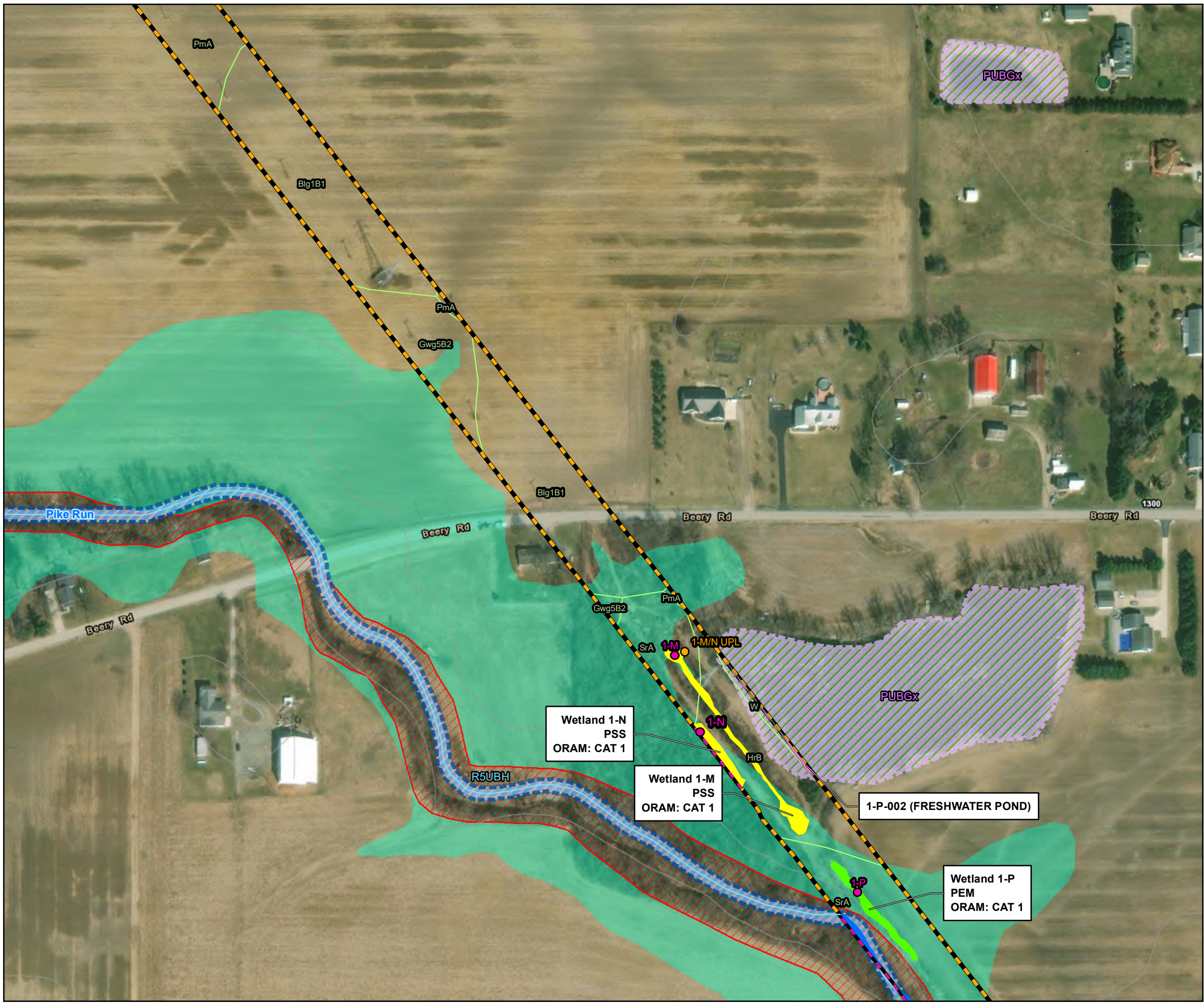
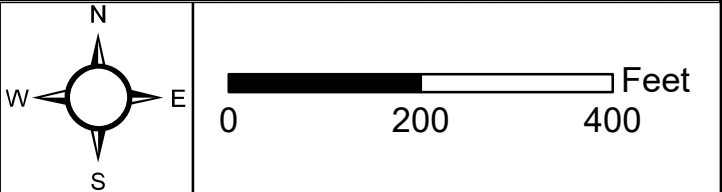
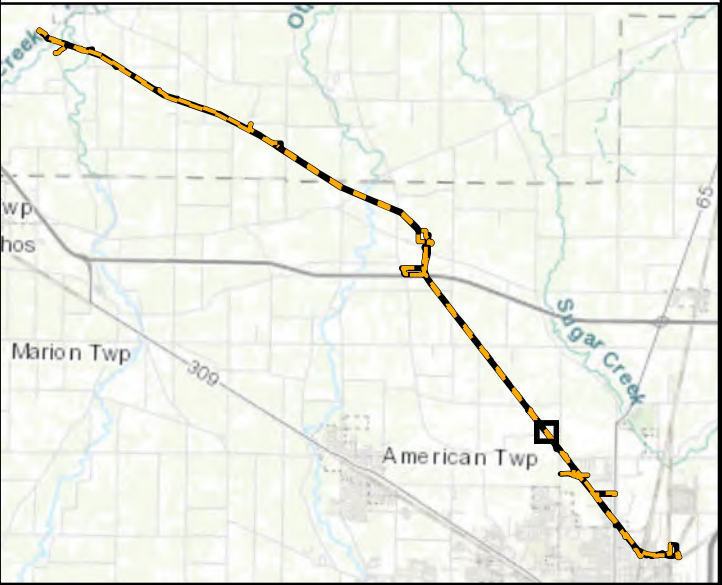


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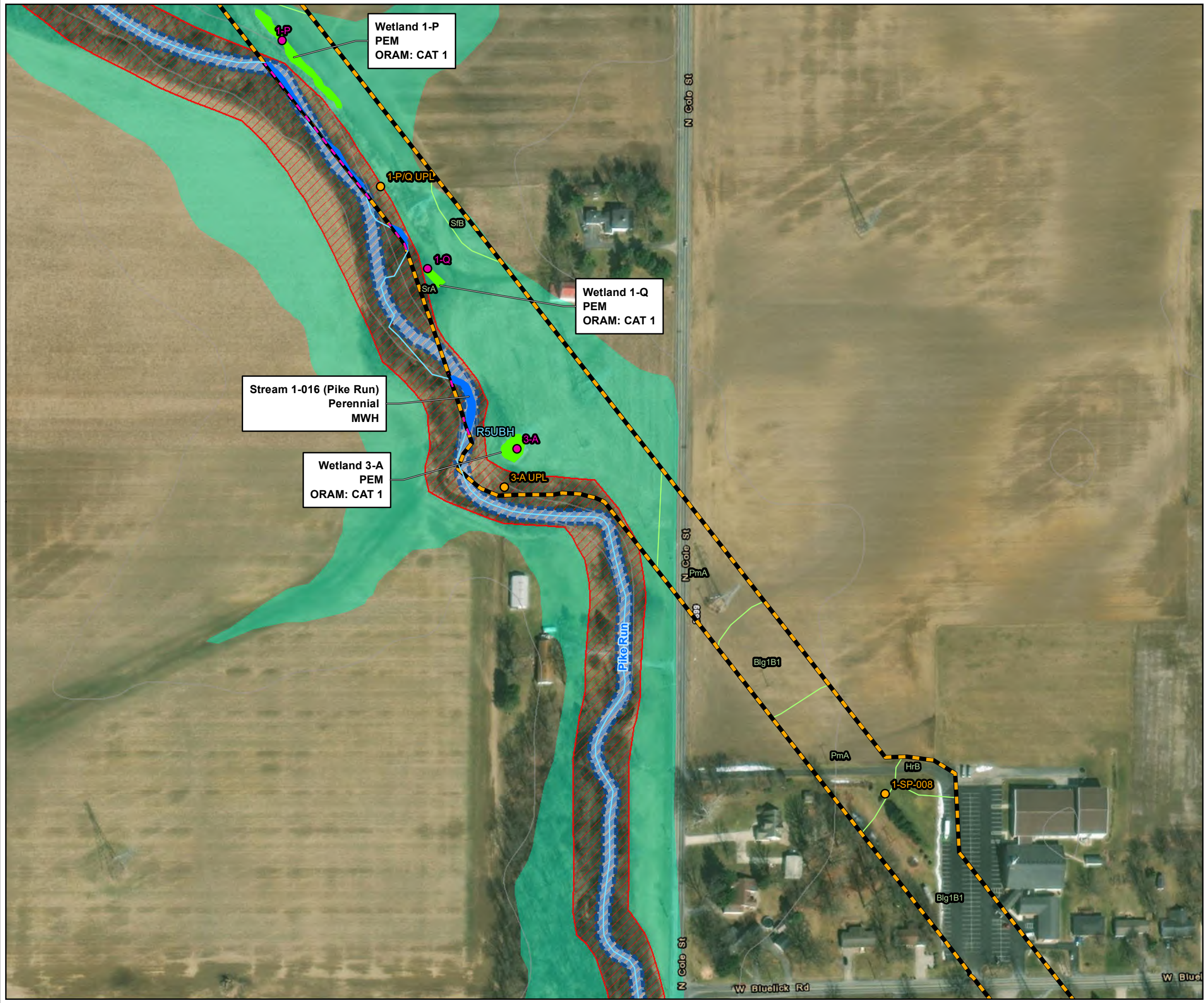
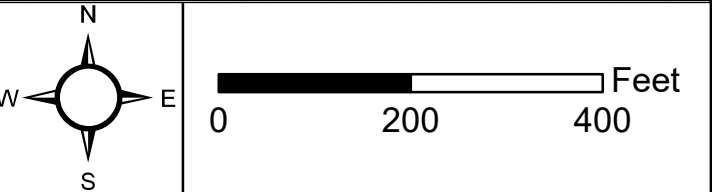
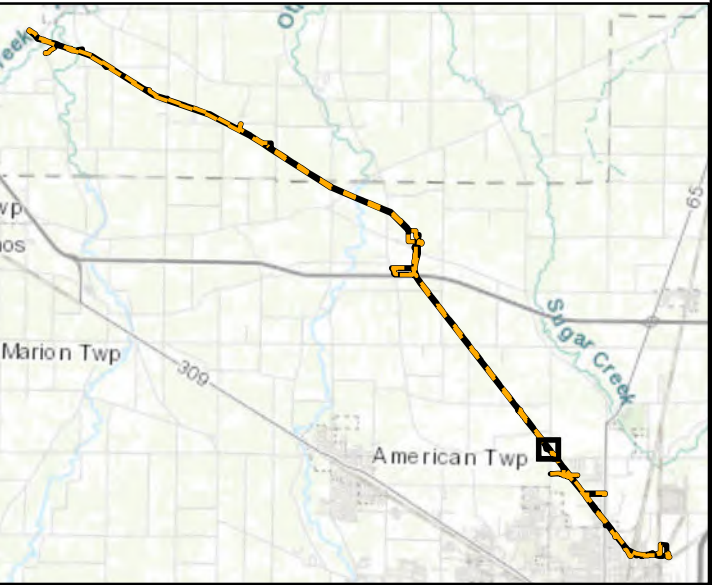


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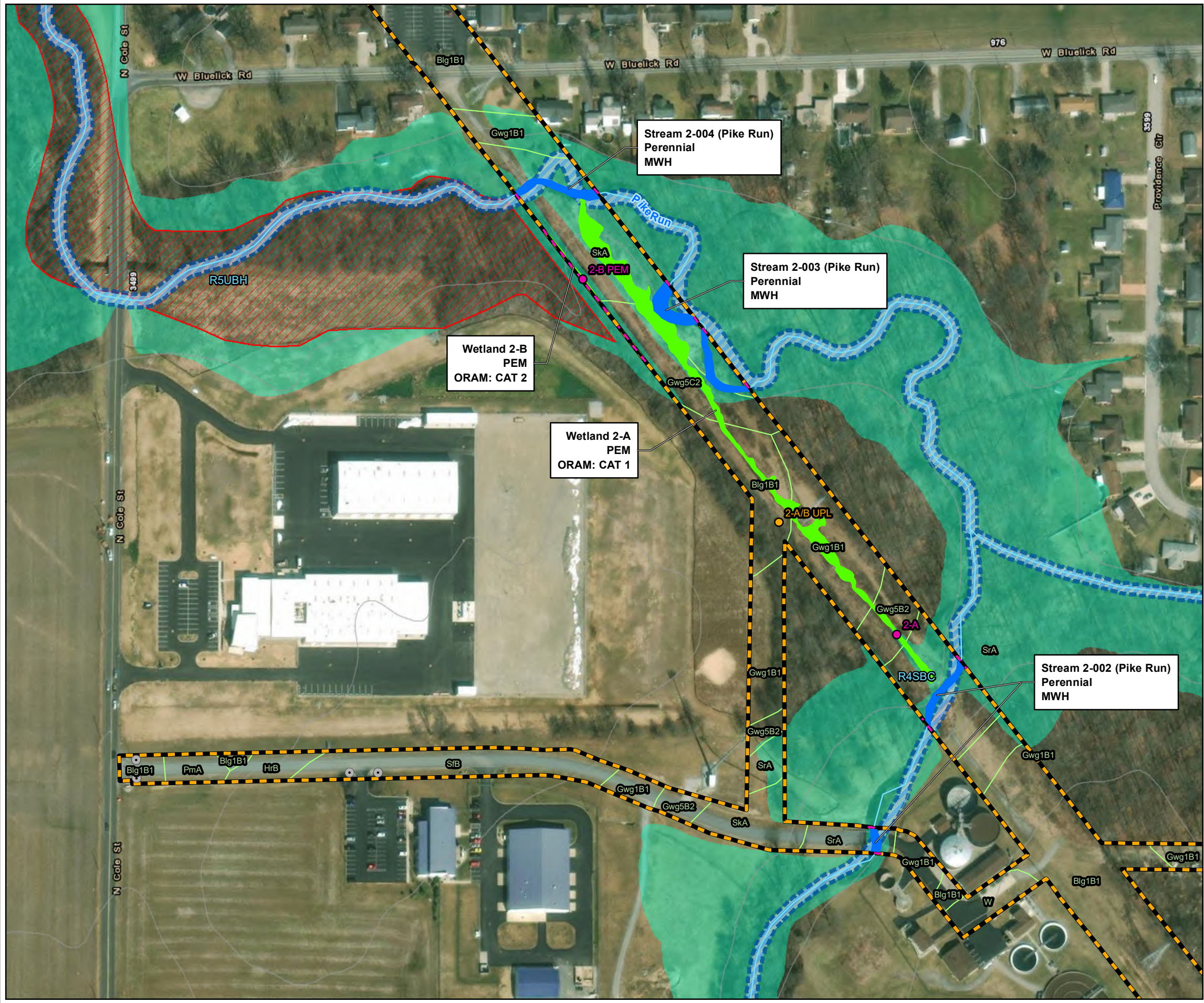
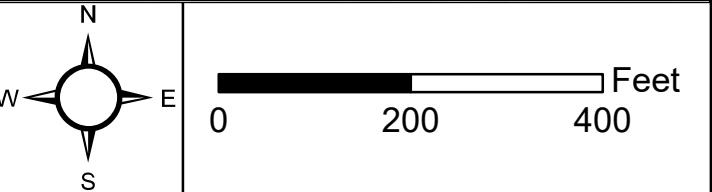
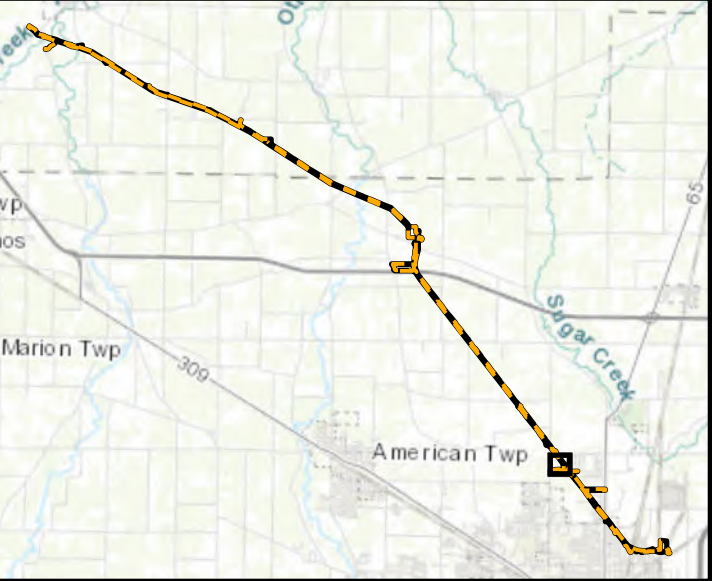


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

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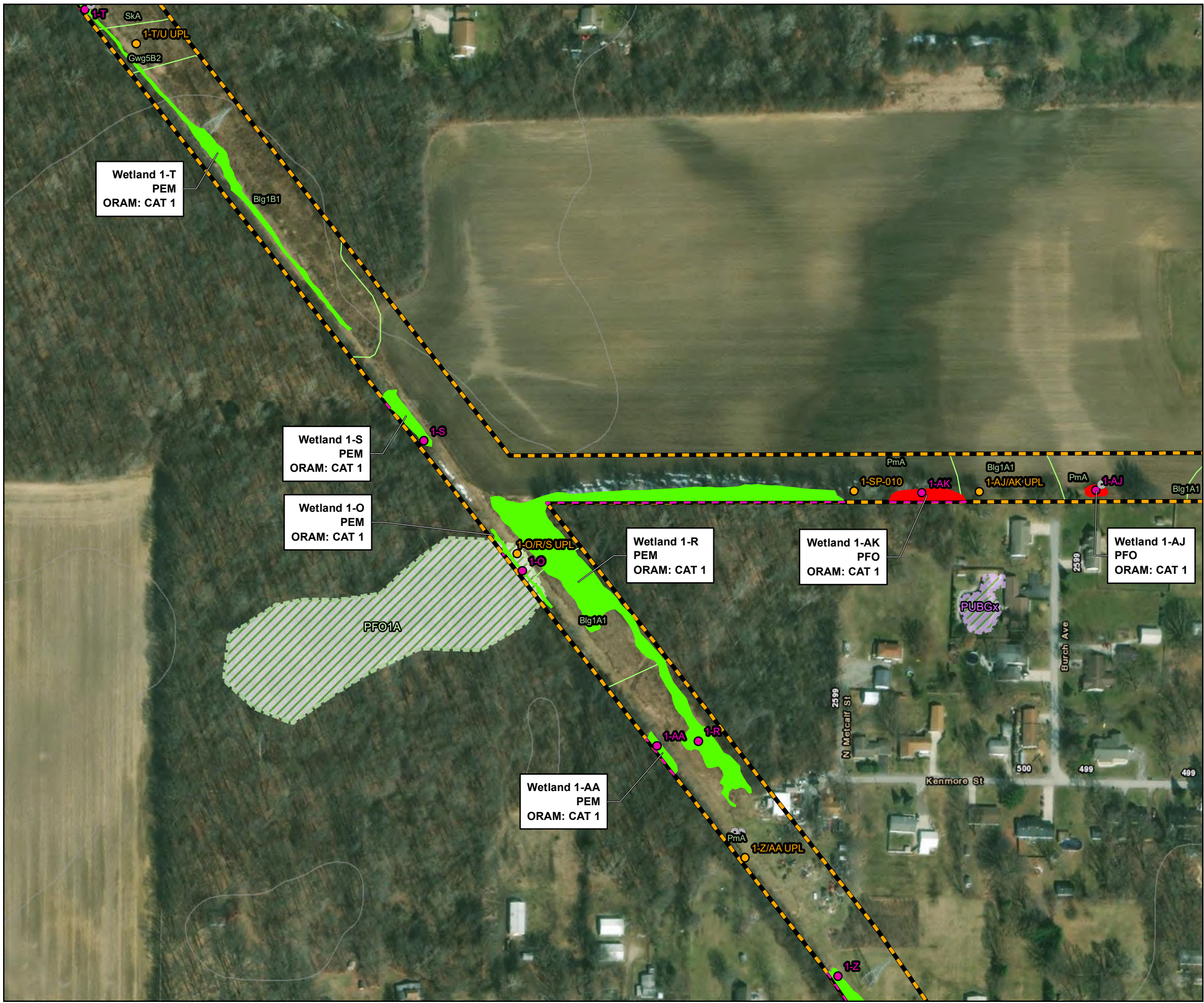
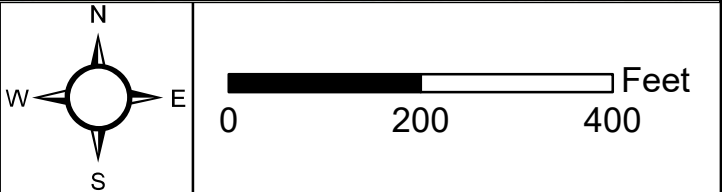
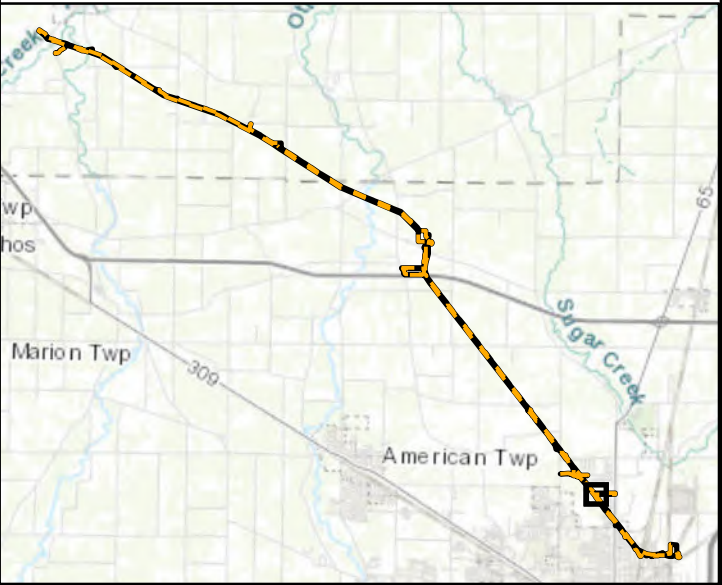


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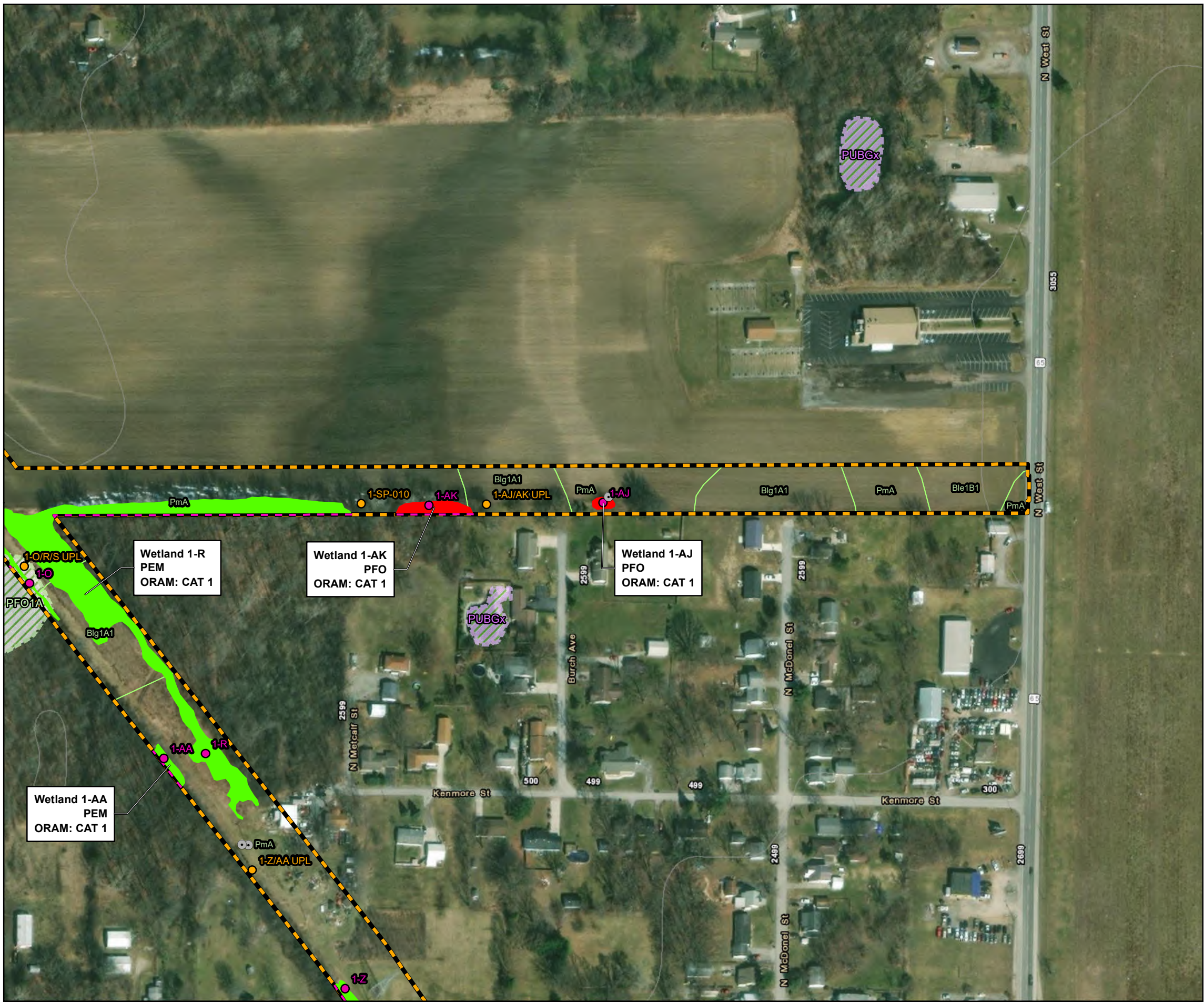
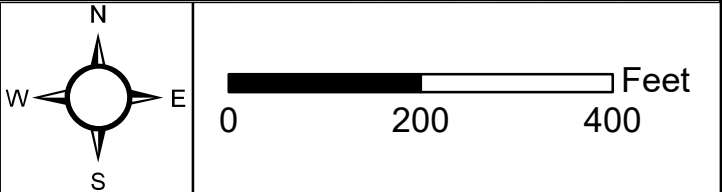
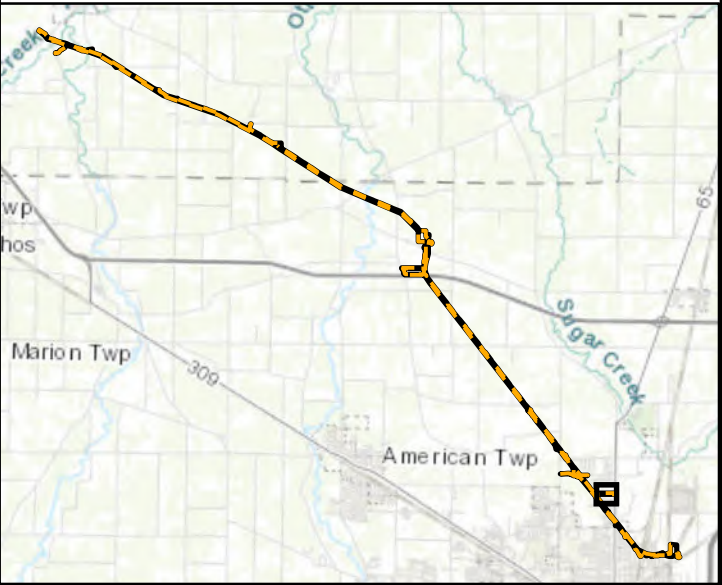


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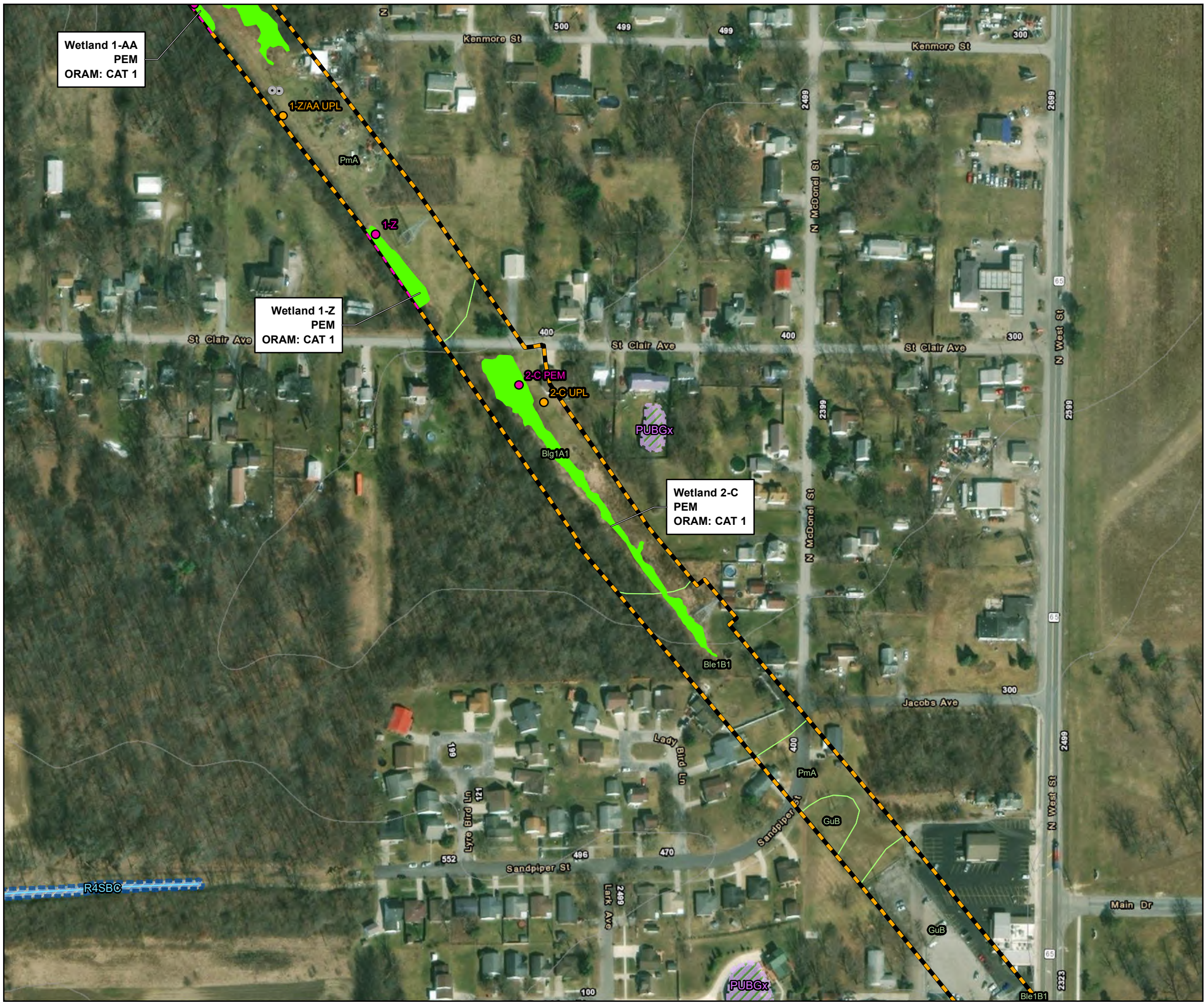
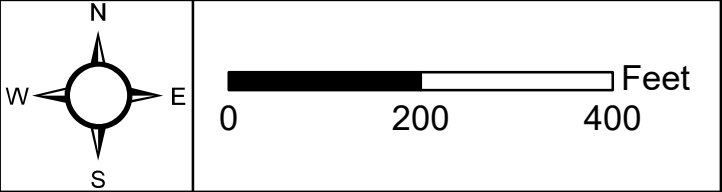
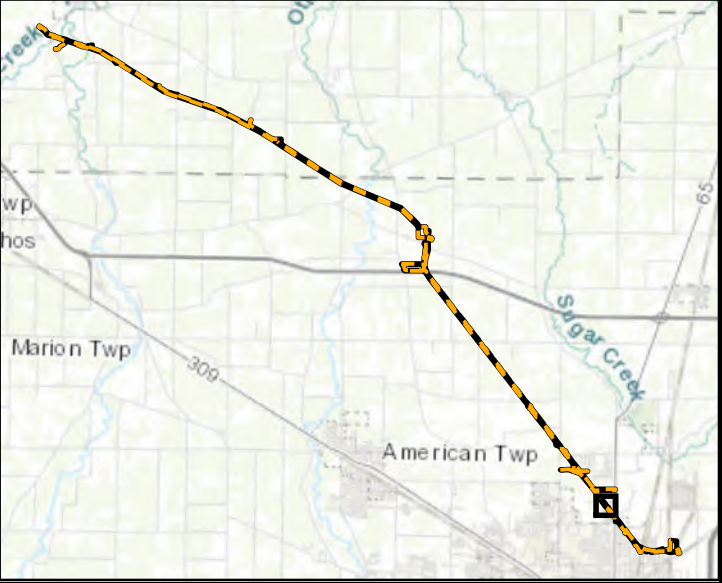


Figure 2. Ecological Survey on the AEP Lima - Fort Wayne 138kV Transmission Line Rebuild Project in Allen and Putnam Counties, Ohio.

Map 41 of 46

- Culvert Location
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- National Hydrography Dataset (NHD) Stream
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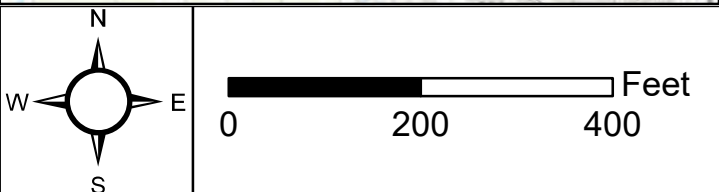
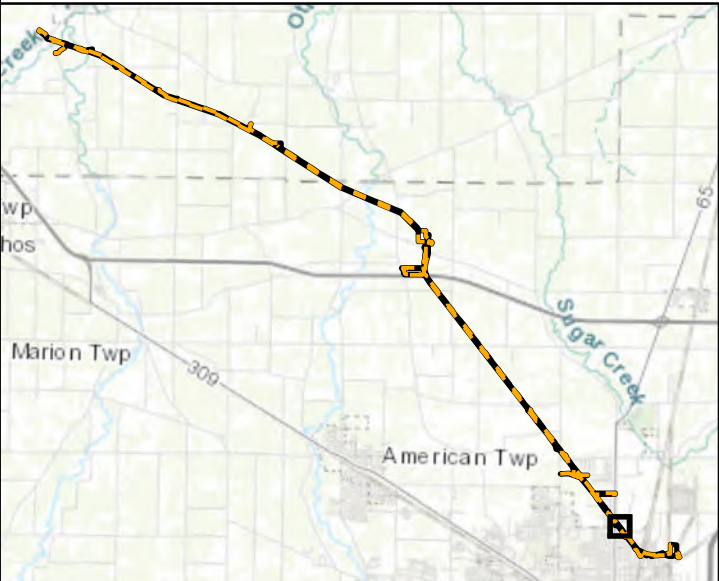
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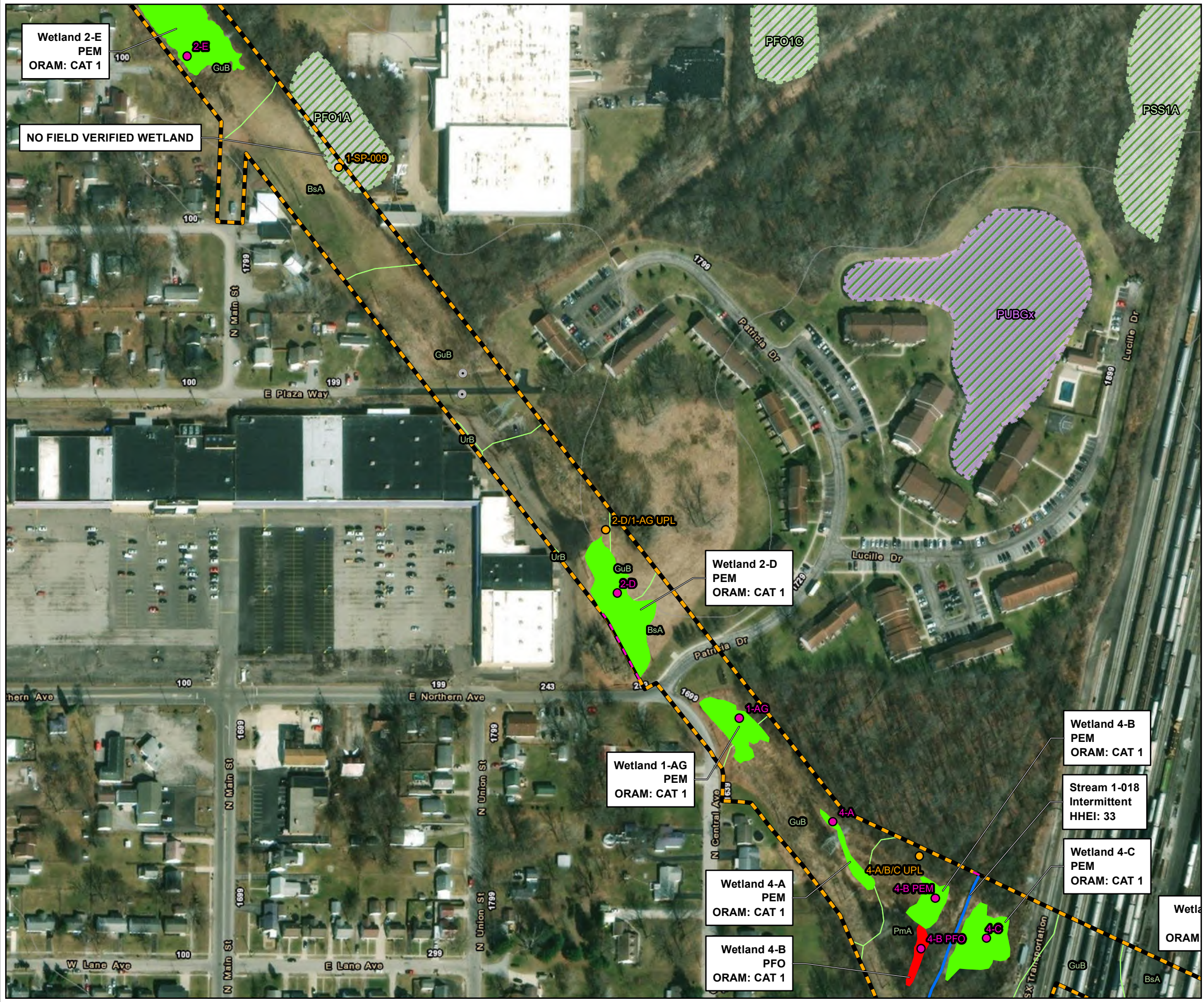
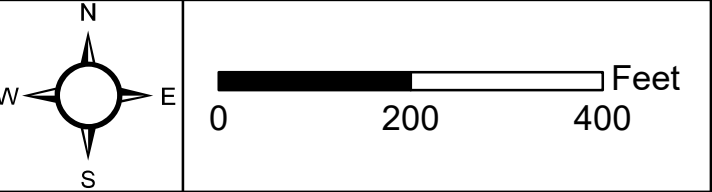
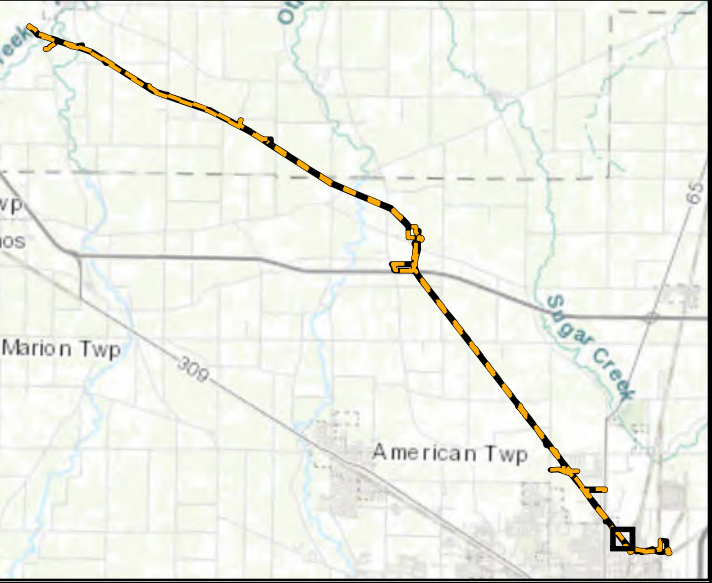


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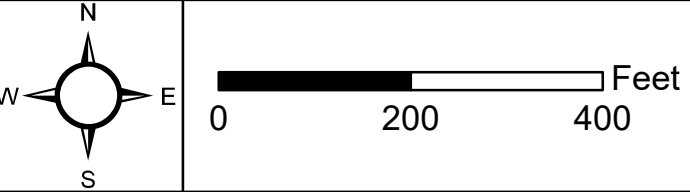
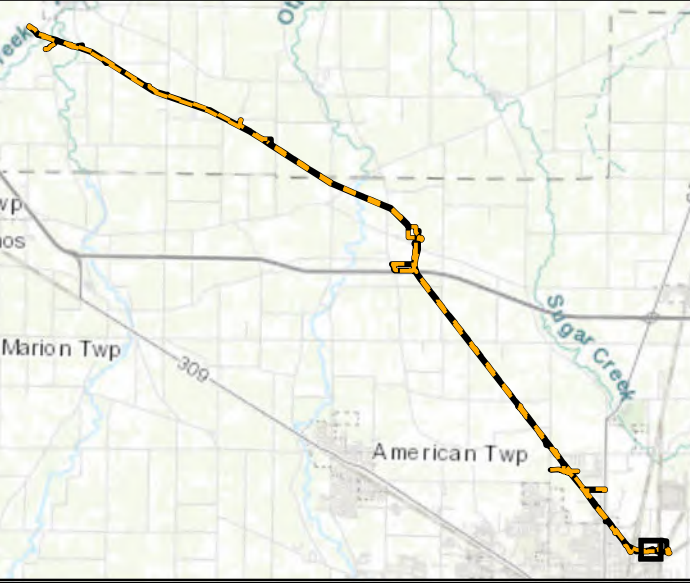
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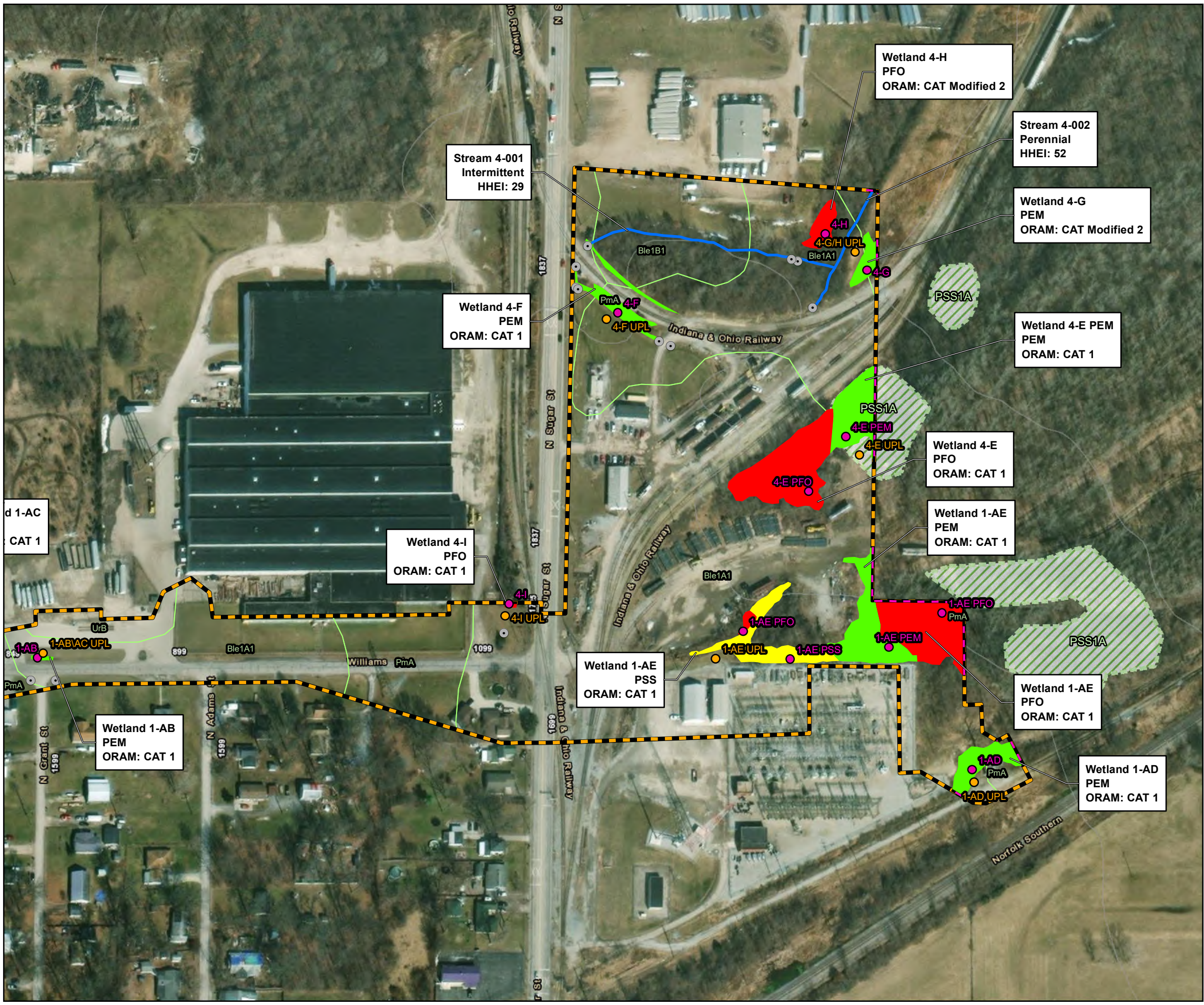
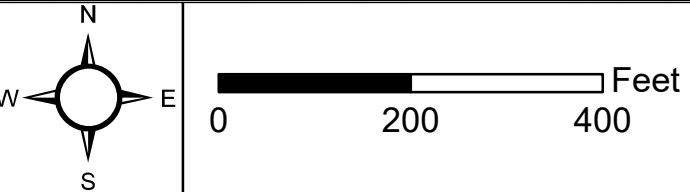


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APPENDIX B
AGENCY CORRESPONDENCE/DESKTOP ASSESSMENT

Note: Formerly called North Delphos to Rockhill 138 kV Transmission Line Rebuild



Valerie Clarkston

Subject: FW: AEP North Delphos-Rockhill 138 kV Transmission Line Rebuild Project, Allen and Putnam Counties, Ohio

From: Ohio, FW3 <ohio@fws.gov>

Sent: Tuesday, August 3, 2021 10:19 AM

To: jake.lubbers@aecom.com

Cc: nathan.reardon@dnr.state.oh.us; Parsons, Kate <kate.parsons@dnr.state.oh.us>; beth.wilburn@aecom.com; rachanderson@easi.com; Mia R Hall <mrhall@aep.com>; thomas.lipp@aecom.com

Subject: [EXTERNAL] AEP North Delphos-Rockhill 138 kV Transmission Line Rebuild Project, Allen and Putnam Counties, Ohio

This is an **EXTERNAL** email. **STOP. THINK** before you **CLICK** links or **OPEN** attachments. If suspicious please click the 'Report to Incidents' button in Outlook or forward to incidents@aep.com from a mobile device.



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# 03E15000-2021-TA-1839

Dear Mr. Lubbers,

The U.S Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found 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 breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet 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, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal 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 removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is 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, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then 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 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. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army 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. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or 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, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Patrice Ashfield". The signature is fluid and cursive, with the first name "Patrice" and last name "Ashfield" clearly distinguishable.

Patrice Ashfield
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Kate Parsons, ODNR-DOW



Ohio Department of Natural Resources

MIKE DeWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate

John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

September 1, 2021

Jake Lubbers
AECOM
525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Re: 21-0715; AEP North Delphos-Rockhill 138 kV Transmission Line Rebuild Project

Project: The proposed project involves rebuilding approximately 15 miles of transmission line between North Delphos Substation and Rock Hill Substation.

Location: The proposed project is located in Allen and Putnam Counties, Ohio.

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

Natural Heritage Database: The Natural Heritage Database has the following data at or within a one mile radius of the project area:

Purple wartyback (*Cyclonaias tuberculata*), SC
Wavy-rayed lampmussel (*Lampsilis fasciola*), SC
Creek heelsplitter (*Lasmigona compressa*), SC
Clubshell (*Pleurobema clava*), E, FE
Purple lilliput (*Toxolasma lividus*), E
Deertoe (*Truncilla truncata*), SC
Greater redhorse (*Moxostoma valenciennesi*), T

The review was performed on the project area specified in the request as well as an additional one mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity. Additional comments on some of the features may be found in pertinent sections below.

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

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federal endangered, and FT = federal threatened.

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

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the “OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING”. If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS “Range-wide Indiana Bat Survey Guidelines.” If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Erin Hazelton for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the clubshell (*Pleurobema clava*), a state endangered and federally endangered mussel, the northern riffleshell (*Epioblasma torulosa rangiana*), a state endangered and federally endangered mussel, and the pondhorn (*Uniomerus tetralasmus*), a state threatened mussel. This project must not have an impact on freshwater native mussels at the project site. This applies to both listed and non-listed species. Per the Ohio Mussel Survey Protocol (2020), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. This is further explained within the Ohio Mussel Survey Protocol. Therefore, if in-water work is planned in any stream that

meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, as a last resort, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. The Ohio Mussel Survey Protocol (2020) can be found at:

<https://ohiodnr.gov/static/documents/wildlife/permits/dow-protocol-ohio-mussel-survey.pdf>

The project is within the range of the pirate perch (*Aphredoderus sayanus*), a state endangered fish, and the greater redhorse (*Moxostoma valenciennesi*), a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

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

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

Water Resources: The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

Valerie Clarkston

From: Nathan.Reardon@dnr.ohio.gov
Sent: Friday, January 14, 2022 1:40 PM
To: Valerie Clarkston
Cc: mrhall@aep.com; Michael Wellman
Subject: RE: 21-0715; AEP's North Delphos-Rockhill 138kV Transmission Line Rebuild Project

CAUTION: This email originated from outside of our organization. DO NOT click links or open attachments unless you recognize the sender and know the content is safe!

Hello Valerie,

Thank you for providing the upland sandpiper assessment. The DOW concurs that suitable habitat is not present within project area, and therefore, impacts to the upland sandpiper are not likely.

Thank you,
Nathan



Nathan Reardon
Compliance Coordinator
ODNR Division of Wildlife
2045 Morse Road
Columbus, OH 43229
Phone: 614-265-6741
Email: nathan.reardon@dnr.ohio.gov

Support Ohio's wildlife. Buy a license or stamp at wildohio.gov.

This message is intended solely for the addressee(s). Should you receive this message by mistake, we would be grateful if you informed us that the message has been sent to you in error. In this case, we also ask that you delete this message and any attachments from your mailbox, and do not forward it or any part of it to anyone else. Thank you for your cooperation and understanding.

Please consider the environment before printing this email.

From: Valerie Clarkston <VClarkston@envsi.com>
Sent: Friday, January 14, 2022 8:52 AM
To: Reardon, Nathan <Nathan.Reardon@dnr.ohio.gov>
Cc: mrhall@aep.com; Michael Wellman <mwellman@envsi.com>
Subject: 21-0715; AEP's North Delphos-Rockhill 138kV Transmission Line Rebuild Project

Good morning Mr. Reardon,

American Electric Power's (AEP's) North Delphos-Rockhill 138kV Transmission Line Rebuild Project (Project) is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. The ODNR-Division of Wildlife (DOW) indicated construction should be avoided in upland sandpiper habitat during the species' nesting period of 15 April to 31 July (ER letter attached). Upland sandpipers prefer to nest within larger, 123.5 to 494.2-acre (50 – 200 ha), open tracts of native grasslands, prairies, meadows to lightly grazed pastures and hayfields (Vickery et al. 1994, Mong 2005). Studies conducted in the Midwest and northeast also noted upland sandpipers avoid uniform, tall grasses and prefer to nest in areas with a variety of vegetation heights (Ailes 1980, Buhnerkempe and Westemeier 1988, Vickery et al. 1994). In Ohio, airport habitats support the majority (74%) of nesting upland sandpipers (Osborne and Peterson 1984). Biologists did not observe potentially suitable habitat for the upland sandpiper within the Project's AOI. Instead, most of the open-tract habitats observed included row crops and heavily grazed livestock pastures (see link below to access Project maps). Roadside tracts of grassland do exist but are likely too small and fragmented to support a breeding population of upland sandpipers. Based on current proposed Project activity, recommendations within ODNR's environmental review letter, and the above review of the Project area, no conflicts with upland sandpipers are anticipated.

[Mapping - North Delphos-Rockhill 138kV Transmission Line Rebuild Project](#)

On behalf of AEP, ESI is requesting concurrence from ODNR on the above assessment of upland sandpipers with regards to the North Delphos-Rockhill 138kV Transmission Line Rebuild Project. Please reach out to us with any questions or requests for additional information.

Thank you,

Valerie



Valerie Clarkston, M.S., CWB®, CE

Project Manager

Environmental Solutions & Innovations, Inc.
8 Bettys Lane | Scott Depot, WV 25560 | USA
office: 304.760.5803 **fax:** 513.451.3321
direct: 513.591.4315 **cell:** 513.382.0925
vclarkston@envsi.com | www.envsi.com

Literature Cited Above:

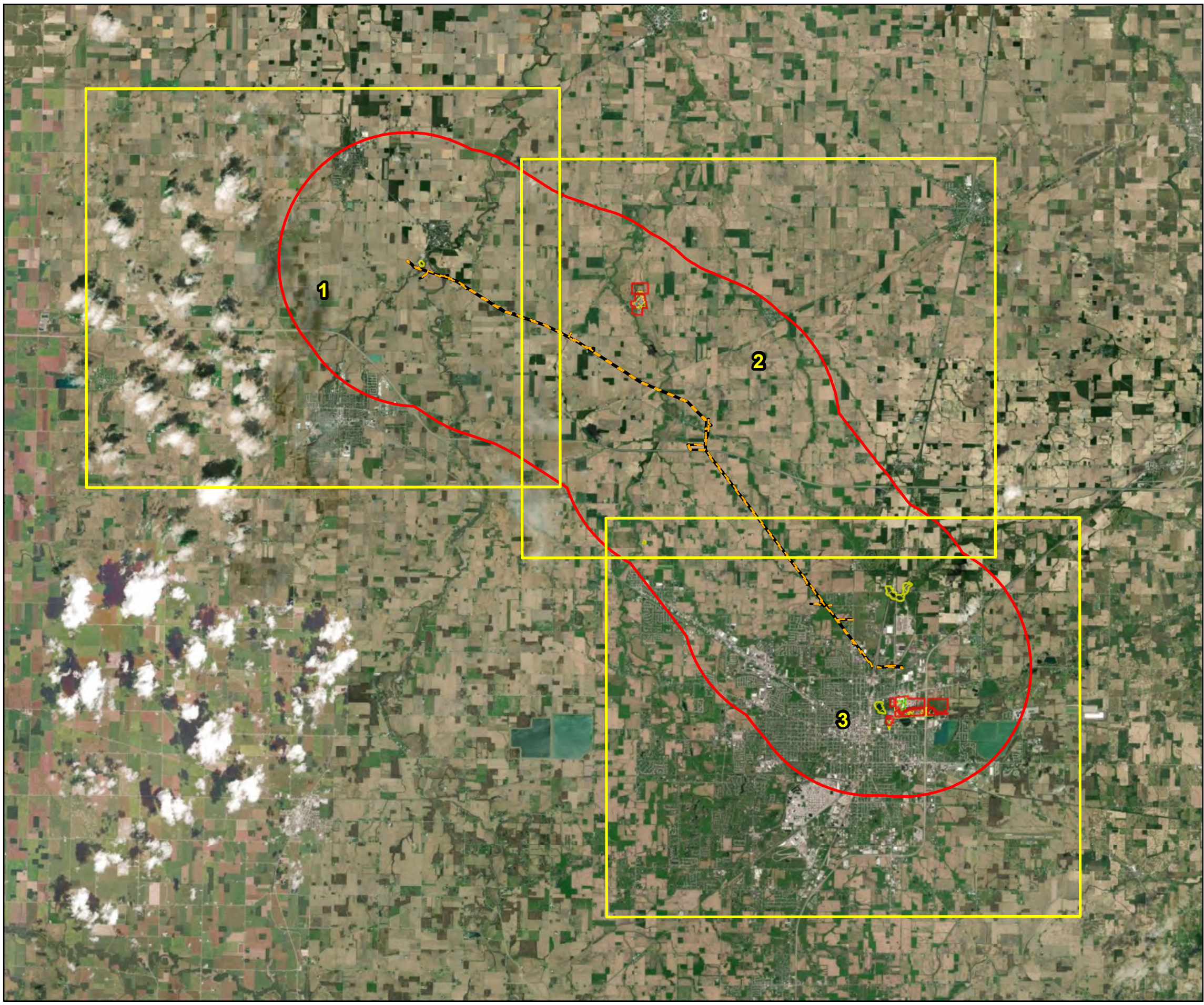
Ailes, I. W. 1980. Breeding biology and habitat use of the upland sandpiper in central Wisconsin. Passenger Pigeon 42:53-63.

Buhnerkempe, J. E., and R. L. Westemeier. 1988. Breeding biology and habitat of upland sandpipers on prairie-chicken sanctuaries in Illinois. Transactions of the Illinois Academy of Science 81:153-162.

Mong, T. W. 2005. Using radio-telemetry to determine range and resource requirements of upland sandpipers at an experimentally managed prairie landscape. Master's Thesis. Kansas State University, Manhattan, Kansas. 74 pp.

Osborne, D. R., and A. T. Peterson. 1984. Decline of the upland sandpiper (*Bartramia, Longicauda*) in Ohio: An endangered species. Ohio Journal of Science 84:8-10.

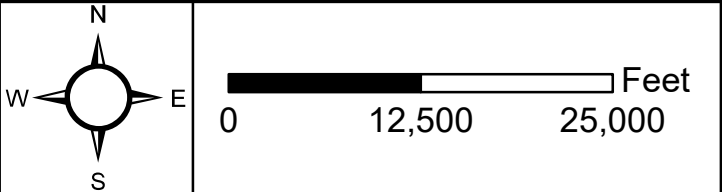
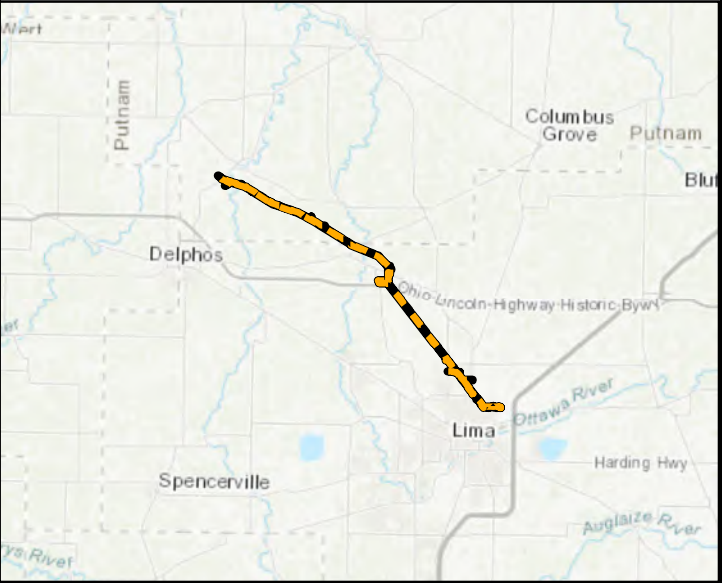
Vickery, P. D., M. L. Hunter, and S. M. Melvin. 1994. Effects of habitat area on the distribution of grassland birds in Maine. Conservation Biology 8:1087-1097.



Evidence of current and historic mining operations within 3 miles of AEP's North Delphos-Rockhill Rebuild Project.

Map Key

- Area of Investigation (AOI)
- 3-Mile Buffer
- Type of Mining Activity**
 - Historic Quarry Area
 - Active Quarry Area
 - Past Quarry Area
 - Area Detailed on Subsequent Maps 1 through 3



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster



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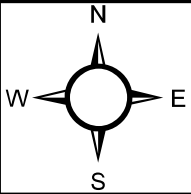
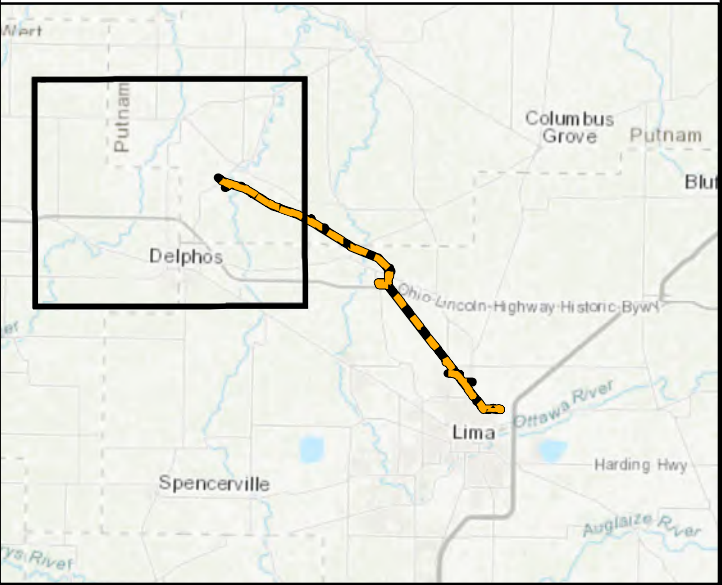
Project No. 1730



Evidence of current and historic mining operations within 3 miles of AEP's North Delphos-Rockhill Rebuild Project.

Map 1 of 3

-  Area of Investigation (AOI)
-  3-Mile Buffer
- Type of Mining Activity**
-  Historic Quarry Area

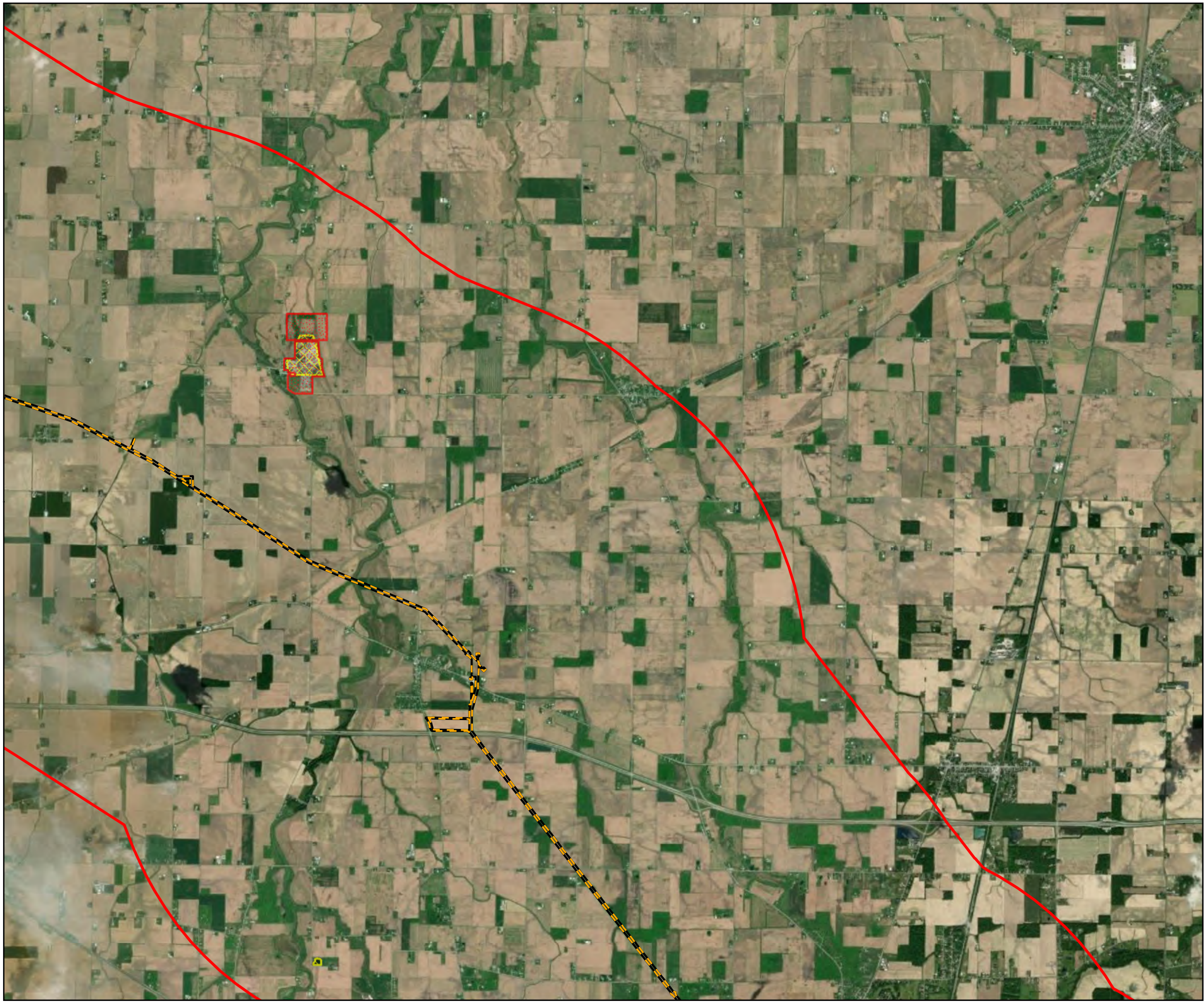


0 5,000 10,000 Feet

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster



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Project No. 1730



Evidence of current and historic mining operations within 3 miles of AEP's North Delphos-Rockhill Rebuild Project.

Map 2 of 3

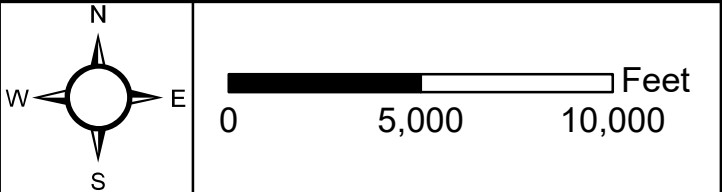
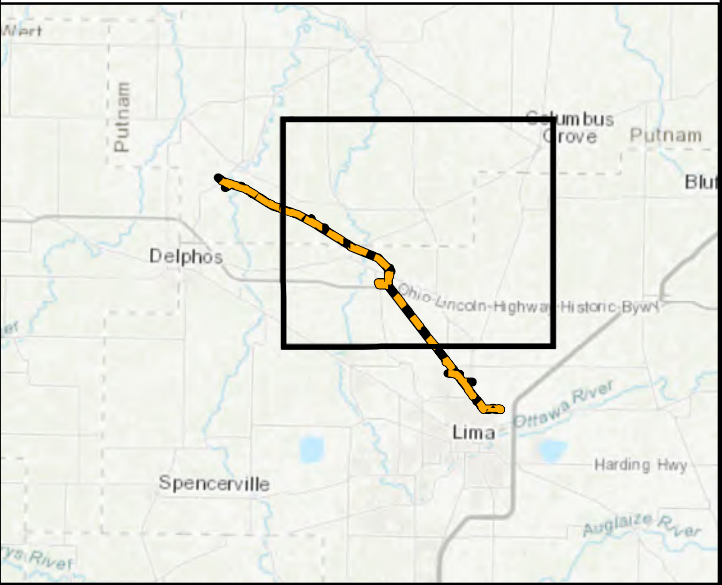
 Area of Investigation (AOI)

 3-Mile Buffer

Type of Mining Activity

 Historic Quarry Area

 Active Quarry Area

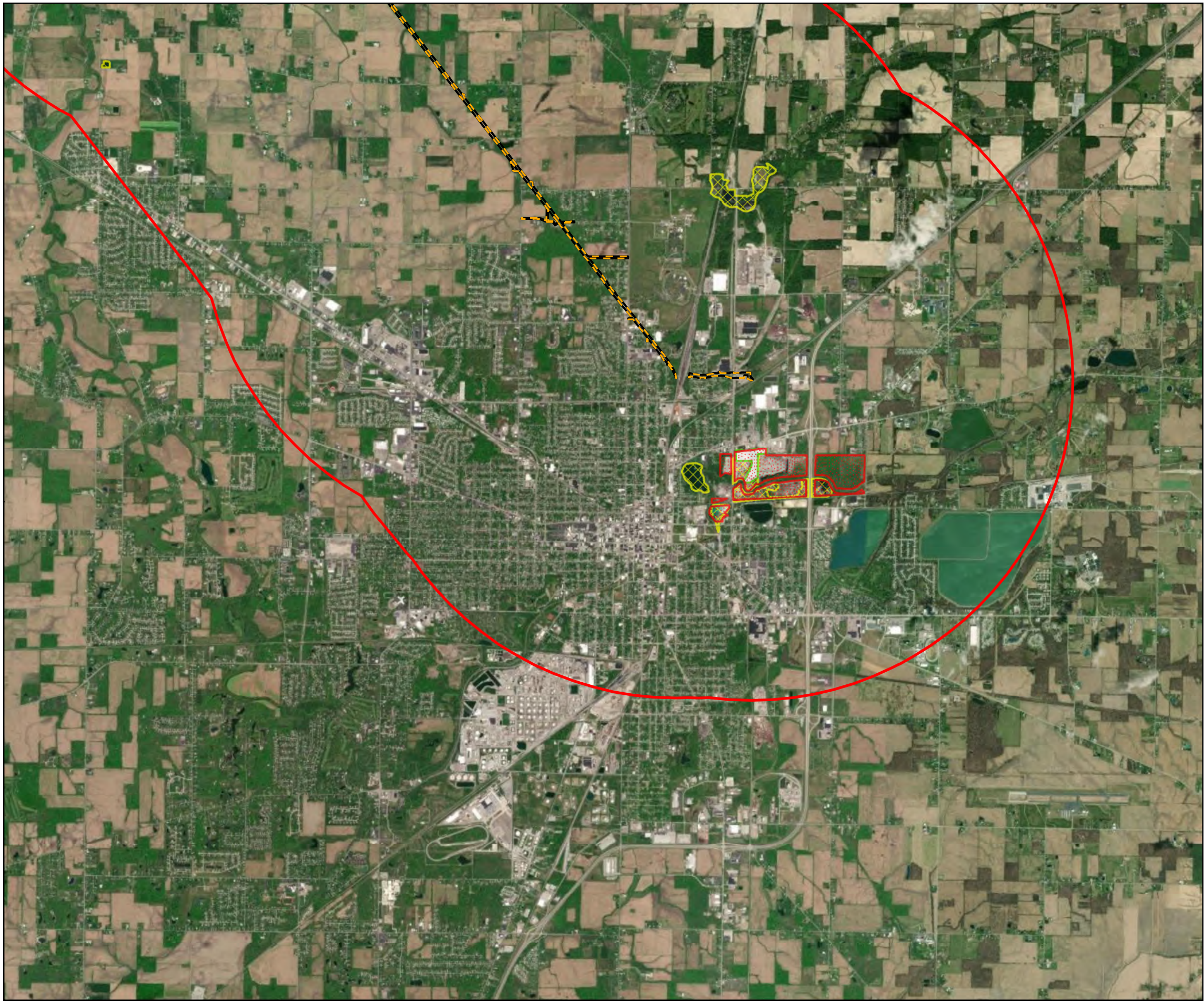


Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster



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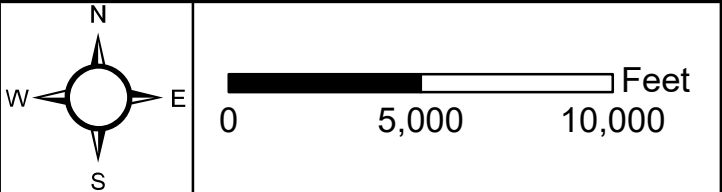
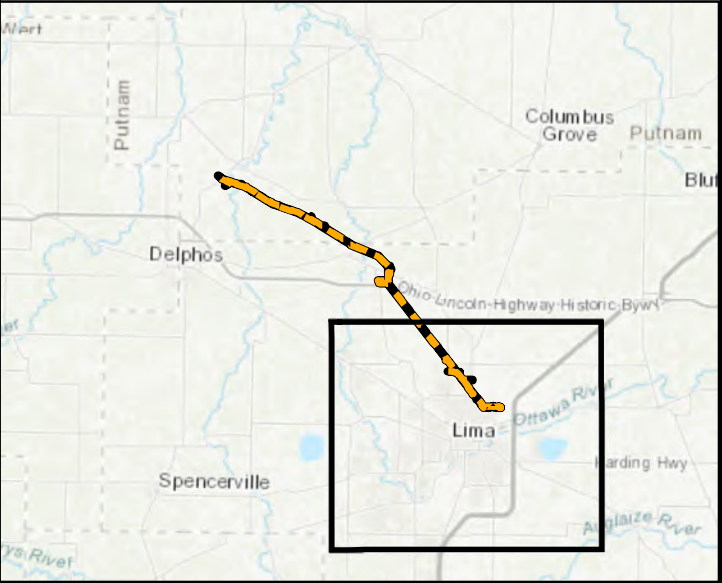
Project No. 1730



Evidence of current and historic mining operations within 3 miles of AEP's North Delphos-Rockhill Rebuild Project.

Map 3 of 3

- Area of Investigation (AOI)
- 3-Mile Buffer
- Type of Mining Activity**
 - Historic Quarry Area
 - Active Quarry Area
 - Past Quarry Area



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster

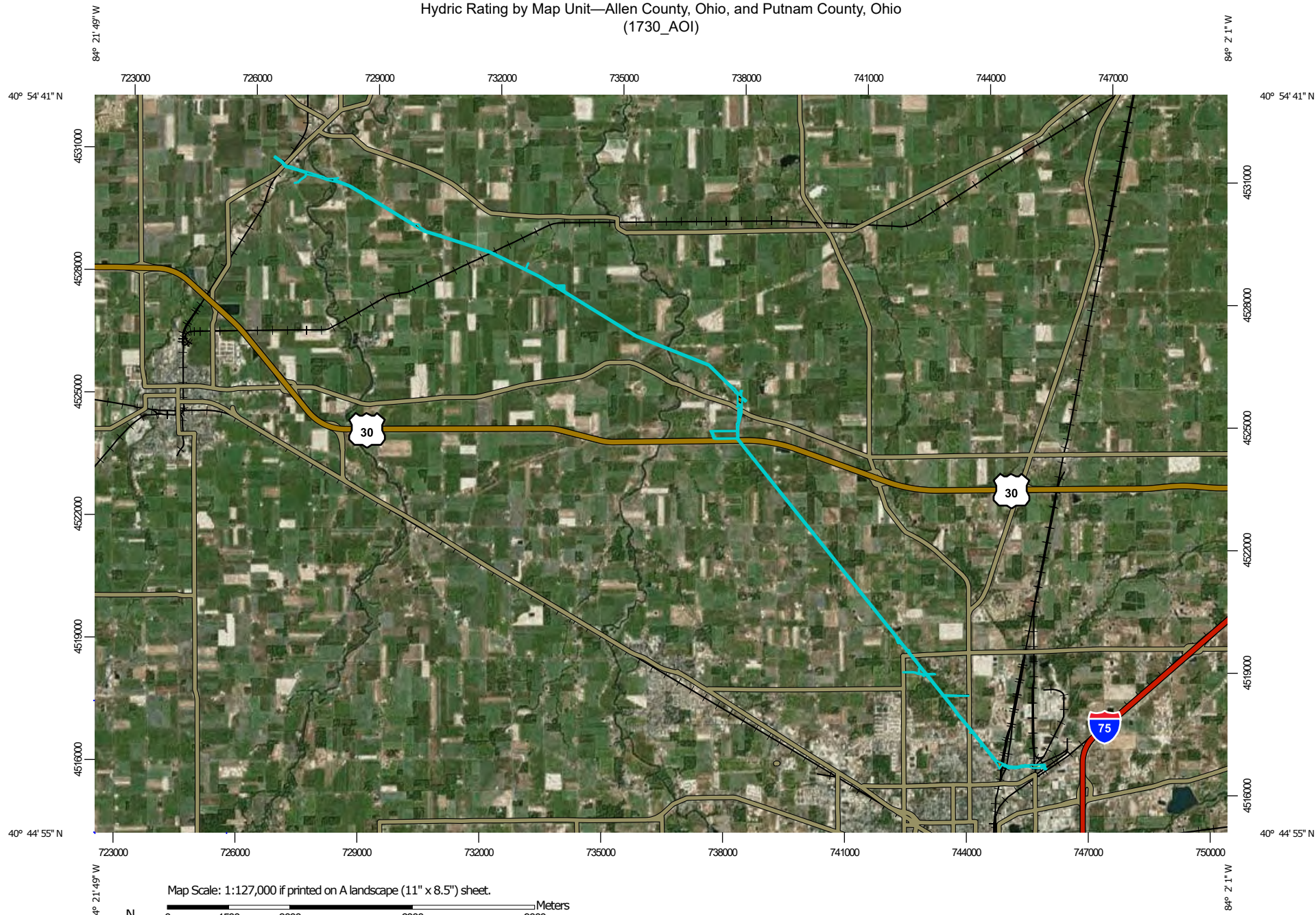


**ENVIRONMENTAL SOLUTIONS
& INNOVATIONS, INC.**
Project No. 1730

APPENDIX C
SOIL REPORT



Hydric Rating by Map Unit—Allen County, Ohio, and Putnam County, Ohio (1730_AOI)



Map Scale: 1:127,000 if printed on A landscape (11" x 8.5") sheet.

0 1500 3000 6000 9000 Meters

0 5000 10000 20000 30000 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

10/15/2021
Page 1 of 7

Hydric Rating by Map Unit—Allen County, Ohio, and Putnam County, Ohio
(1730_AOI)

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Water Features

-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

-  Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:12,000 to 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Allen County, Ohio

Survey Area Data: Version 21, Aug 31, 2021

Soil Survey Area: Putnam County, Ohio

Survey Area Data: Version 20, Sep 13, 2021

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 14, 2019—Oct 23, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AkA	Alvada loam, 0 to 1 percent slopes	90	10.5	3.6%
AmA	Alvada silty clay loam, 0 to 1 percent slopes	90	0.8	0.3%
AuA	Aurand loam, 0 to 3 percent slopes	14	0.7	0.2%
AxA	Aurand silt loam, 0 to 3 percent slopes	6	0.6	0.2%
Ble1A1	Blount silt loam, end moraine, 0 to 2 percent slopes	6	7.6	2.6%
Ble1B1	Blount silt loam, end moraine, 2 to 4 percent slopes	6	1.6	0.6%
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	9	22.8	7.9%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	9	15.1	5.2%
BsA	Blount-Urban land complex, 0 to 2 percent slopes	9	7.1	2.5%
CyA	Cygnets loam, 0 to 3 percent slopes	10	7.2	2.5%
GkB	Glynwood loam, 2 to 6 percent slopes	4	0.0	0.0%
GuB	Glynwood-Urban land complex, 2 to 6 percent slopes	0	11.1	3.8%
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	6	3.8	1.3%
Gwg5B2	Glynwood clay loam, ground moraine, 2 to 6 percent slopes, eroded	6	1.7	0.6%
Gwg5C2	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	7	0.6	0.2%
HcA	Hoytville silty clay loam, 0 to 1 percent slopes	90	2.1	0.7%
HpB	Houcktown sandy loam, 2 to 4 percent slopes	5	1.1	0.4%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HrA	Houcktown loam, 0 to 2 percent slopes	4	1.7	0.6%
HrB	Houcktown loam, 2 to 6 percent slopes	5	2.7	0.9%
HsA	Houcktown silt loam, 0 to 2 percent slopes	5	8.0	2.8%
HtA	Hoytville silty clay, 0 to 1 percent slopes	90	5.7	2.0%
KnA	Knoxdale silt loam, 0 to 2 percent slopes, occasionally flooded	5	3.5	1.2%
NpA	Nappanee clay loam, 0 to 2 percent slopes	5	0.7	0.3%
PmA	Pewamo silty clay loam, 0 to 1 percent slopes	91	45.2	15.7%
PoA	Pewamo-Urban land complex, 0 to 2 percent slopes	59	0.3	0.1%
RgA	Rensselaer silt loam, 0 to 1 percent slopes	90	7.2	2.5%
SbA	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	93	1.7	0.6%
SfB	Shawtown loam, 2 to 6 percent slopes	0	3.5	1.2%
SgC2	Shinrock clay loam, 6 to 12 percent slopes, eroded	0	0.2	0.1%
SkA	Shoals silt loam, till substratum, 0 to 1 percent slopes, occasionally flooded	0	2.6	0.9%
SrA	Sloan silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	90	6.7	2.3%
UdD	Udorthents, loamy, 12 to 25 percent slopes	10	0.5	0.2%
UrB	Urban land, undulating	0	0.4	0.1%
W	Water	0	0.6	0.2%
Subtotals for Soil Survey Area			185.7	64.3%
Totals for Area of Interest			288.6	100.0%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Df	Defiance silty clay loam	5	2.6	0.9%
DnA	Digby loam, 0 to 2 percent slopes	10	0.6	0.2%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HcA	Hoytville silty clay loam, 0 to 1 percent slopes	90	1.1	0.4%
HnA	Haskins loam, 0 to 2 percent slopes	10	1.0	0.3%
HnB	Haskins loam, 2 to 6 percent slopes	15	0.4	0.2%
HtA	Hoytville silty clay, 0 to 1 percent slopes	90	71.2	24.7%
Ls	Lenawee silty clay loam, 0 to 1 percent slopes	93	0.7	0.2%
Md	Merrill loam	95	2.2	0.8%
NaA	Nappanee loam, 0 to 2 percent slopes	10	3.4	1.2%
NpA	Nappanee silt loam, 0 to 2 percent slopes	10	8.1	2.8%
NpB	Nappanee silt loam, 2 to 6 percent slopes	10	1.7	0.6%
RmB	Rawson loam, 2 to 6 percent slopes	0	1.6	0.5%
ScB	St. Clair silt loam, 2 to 6 percent slopes	0	0.8	0.3%
ScC2	St. Clair silt loam, 6 to 12 percent slopes, moderately eroded	0	1.7	0.6%
So	Sloan silty clay loam	95	5.0	1.7%
W	Water	0	0.8	0.3%
Subtotals for Soil Survey Area			102.9	35.7%
Totals for Area of Interest			288.6	100.0%

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

APPENDIX D
NWI TABLE

Lima - Fort Wayne 138 kV Transmission Line Rebuild Project
NWI DISPOSITION SUMMARY TABLE

2/9/2022

NWI Code	NWI Description	Figure 2	Related Field Inventoried Resource (Wetland ID / Stream ID)	Comments
PFO1C	Palustrine, broad-leaved deciduous, seasonally flooded	2-1, 2-2	Wetland 1-A	Wetland 1-A extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R2UBH	Riverine, lower perennial, unconsolidated bottom, permanently flooded	2-1, 2-2	Stream 1-001 (Jennings Creek)	Stream 1-001 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R2UBH	Riverine, lower perennial, unconsolidated bottom, permanently flooded	2-3	Stream 1-002 (Auglaize River)	Stream 1-002 extends outside project survey area.
PFO1A	Palustrine, broad-leaved deciduous, temporarily flooded	2-3	Wetland 1-B	Wetland 1-B extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
PFO1A	Palustrine, broad-leaved deciduous, temporarily flooded	2-4, 2-5	n/a	NWI boundary depicted on map was field verified and does not extend into project survey area.
R4SBC	Riverine, intermittent, streambed, seasonally flooded	2-5	Stream 1-003	Stream 1-003 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R4SBC	Riverine, intermittent, streambed, seasonally flooded	2-5	n/a	NWI feature depicted on map was field verified and does not exist within project survey area.
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded	2-7, 2-8	Stream 1-004 (Big Run)	Stream 1-004 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R4SBC	Riverine, intermittent, streambed, seasonally flooded	2-9	n/a	NWI feature depicted on map was field verified and does not exist within project survey area.
R4SBC	Riverine, intermittent, streambed, seasonally flooded	2-10	Stream 1-005	Stream 1-005 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded	2-12	Stream 1-006	Stream 1-006 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
PEM1A	Palustrine, emergent, persistent, temporarily flooded	2-14	Wetland 1-C	NWI boundary and classification depicted on map differs from field verification. May extend outside project survey area.
R4SBC	Riverine, intermittent, streambed, seasonally flooded	2-14	Stream 1-007	Stream 1-007 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R2UBH	Riverine, lower perennial, unconsolidated bottom, permanently flooded	2-18, 2-19	Stream 1-011 (Ottawa River)	Stream 1-011 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R2UBH	Riverine, lower perennial, unconsolidated bottom, permanently flooded	2-23	Stream 1-012 (Pike Run)	Stream 1-012 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.

Please note that the information presented in this table may not be verified by applicable regulatory agencies.

Lima - Fort Wayne 138 kV Transmission Line Rebuild Project
NWI DISPOSITION SUMMARY TABLE

2/9/2022

PEM1C	Palustrine, emergent, persistent, seasonally flooded	2-30, 2-31	Wetland 1-F	Wetland 1-F extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded	2-31, 2-32	Stream 1-013 (Pike Run)	Stream 1-013 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
PEM1Ad	Palustrine, emergent, persistent, temporarily flooded, partly drained/ditched	2-32, 2-33	n/a	NWI boundary depicted on map was field verified and does not extend into project survey area.
PUBGx	Palustrine, unconsolidated bottom, intermittently exposed, excavated	2-35	1-P-002	Pond 1-P-002 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded	2-35, 2-36	Stream 1-016 (Pike Run)	Stream 1-016 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R4SBC	Riverine, intermittent, streambed, seasonally flooded	2-37, 2-38	Stream 2-002 (Pike Run)	Stream 2-002 extends outside project survey area. NWI boundary and classification depicted on map differs from field verified boundary and classification.
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded	2-37	Stream 2-003 (Pike Run)	Stream 2-003 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded	2-37	Stream 2-004 (Pike Run)	Stream 2-004 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
PFO1A	Palustrine, broad-leaved deciduous, temporarily flooded	2-39, 2-40	Wetland 1-O	NWI boundary and classification depicted on map differs from field verification.
PFO1A	Palustrine, broad-leaved deciduous, temporarily flooded	2-42, 2-43	n/a	NWI boundary depicted on map was field verified and does not extend into project survey area.
R4SBC	Riverine, intermittent, streambed, seasonally flooded	2-44	Stream 1-018	Stream 1-018 extends outside project survey area. NWI boundary depicted on map differs from field verified boundary.
PEM1A	Palustrine, emergent, persistent, temporarily flooded	2-44	Wetland 4-D	Wetland 4-D extends outside project survey area. NWI boundary and classification depicted on map differs from field verification.
PEM1A	Palustrine, emergent, persistent, temporarily flooded	2-44	Wetland 1-AF	Wetland 1-AF extends outside project survey area. NWI boundary depicted on map differs from field verification.
PSS1A	Palustrine, scrub-shrub, persistent, temporarily flooded	2-46	Wetland 4-E (PEM)	Wetland 4-E (PEM) extends outside project survey area. NWI boundary and classification depicted on map differs from field verification.

APPENDIX E
RTE TABLE

RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Summary of Potential Ohio State-Listed Species within the Lima - Fort Wayne 138 kV Transmission Line Rebuild Project Area, Allen and Putnam Counties, Ohio

Common Name	Scientific Name	State Listing ¹	Known to Occur Within Counties? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Habitat Observed in Project Area?	ODNR Comments/Recommendations
Birds							
Upland Sandpiper	<i>Bartramia longicauda</i>	E	Yes	No	Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP).	No	ODNR-DOW concurred with absence of suitable habitat findings on 14 January 2022
Mammals							
Indiana Bat	<i>Myotis sodalis</i>	E	No	No	The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas; Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007a; USFWS 2017). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).	Yes	If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during summer months, the DOW recommends a mist net or acoustic survey be conducted between June 1 and August 15, prior to any cutting. If no tree removal is proposed, this project is not likely to impact this species. A desktop assessment for features potentially suitable as bat hibernacula was conducted and Portal searches within the Project's AOI occurred and no features potentially suitable for hibernating bats have been documented.
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	E	No	No	The northern long-eared bat is found throughout Ohio. This species generally forages in forested habitat and openings in forested habitat and utilizes cracks, cavities, and loose bark within live and dead trees, as well as buildings as roosting habitat (Brack et al. 2010; USFWS 2016). The species utilizes caves and abandoned mines as winter hibernacula. Various sized caves are used providing they have a constant temperature, high humidity, and little to no air current (Brack et al. 2010).	Yes	Same as above for Indiana Bat.
Little Brown Bat	<i>Myotis lucifugus</i>	E	Yes	No	During the spring and summer (April 1 through September 30), this species of bat predominately roosts in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, the species is also dependent on the forest structure surrounding roost trees.	Yes	Same as above for Indiana Bat.
Tricolored Bat	<i>Perimyotis subflavus</i>	E	No	No	During the spring and summer (April 1 through September 30), this species of bat predominately roosts in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, the species is also dependent on the forest structure surrounding roost trees.	Yes	Same as above for Indiana Bat.
Freshwater Mussels							
Clubshell	<i>Pleurobema clava</i>	E	Yes	Yes	Freshwater streams as defined in the Ohio Mussel Survey Protocol (2020)	Yes	Conduct mussel survey if in-stream impacts are anticipated in listed streams. Relocate any mussels found prior to in-stream construction.

APPENDIX F
WETLAND, STREAM, AND POND TABLES

Lima - Fort Wayne 138 kV Transmission Line Rebuild Project
POND TABLE

2/9/2022

Pond ID	Location		Delineated Area (acre)
	Latitude	Longitude	
1-P-001	40.8688	-84.2288	0.037
1-P-002	40.7936	-84.1317	0.016
Total:			0.053

**Lima - Fort Wayne 138 kV Transmission Line Rebuild Project
STREAM TABLE**

2/9/2022

Stream ID	Location		Stream Type	Stream Name	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation		
	Latitude	Longitude						Method	Score	Category / Rating / OAC Designation
1-001	40.89494	-84.30426	Perennial	Jennings Creek	377	36	30	Chapter 3745-1	N/A	WWH
1-002	40.89249	-84.29443	Perennial	Auglaize River	145	100	85	Chapter 3745-1	N/A	WWH
1-003	40.88741	-84.28098	Perennial	UNT	148	9	4	HHEI	52	Class II
1-004	40.88197	-84.26838	Perennial	Big Run	930	9	4	Chapter 3745-1	N/A	WWH
1-005	40.87787	-84.25336	Perennial	UNT	139	9	4	HHEI	59	Class II
1-006	40.87286	-84.2383	Perennial	UNT	132	13	8.5	HHEI	N/A	WWH
1-007	40.8670	-84.22486	Perennial	UNT	155	10	6	HHEI	54	Class II
1-008	40.8630	-84.2164	Intermittent	UNT	241	10	6	HHEI	45	Modified Class II
1-009	40.85567	-84.19791	Intermittent	UNT	103	6	3	HHEI	10	Modified Class II
1-010	40.85569	-84.1980	Ephemeral	UNT	35	1	0.25	HHEI	44	Class I
1-011	40.85563	-84.19754	Perennial	Ottawa River	149	135	126	Chapter 3745-1	N/A	WWH
1-012	40.84094	-84.17529	Perennial	Pike Run	193	17	4	Chapter 3745-1	N/A	MWH
1-013	40.8096	-84.1489	Perennial	Pike Run	137	24	18	Chapter 3745-1	N/A	MWH
1-014	40.8095	-84.1488	Ephemeral	UNT	45	3	1	HHEI	10	Class I
1-015	40.8010	-84.1398	Ephemeral	UNT	817	10	6	HHEI	41	Modified Class II

Please note that the information presented in this table may not be verified by applicable regulatory agencies.

**Lima - Fort Wayne 138 kV Transmission Line Rebuild Project
STREAM TABLE**

2/9/2022

1-016	40.7921	-84.13065	Perennial	Pike Run	400	60	45	Chapter 3745-1	N/A	MWH
1-017	40.78143	-84.1190	Ephemeral	UNT	97	2.5	1.5	HHEI	18	Class I
1-018	40.76351	-84.09991	Intermittent	UNT	362	3	2.5	HHEI	33	Class I
1-019	40.7690	-84.10576	Ephemeral	UNT	123	3	2	HHEI	16	Class I
2-001	40.78344	-84.11935	Intermittent	UNT	100	5	3.5	HHEI	30	Modified Class II
2-002	40.78352	-84.1226	Perennial	Pike Run	51	16	12	Chapter 3745-1	N/A	MWH
2-002	40.7844	-84.1222	Perennial	Pike Run	150	15	12	Chapter 3745-2	N/A	MWH
2-003	40.78621	-84.12389	Perennial	Pike Run	304	15	10	Chapter 3745-3	N/A	MWH
2-004	40.7871	-84.1250	Perennial	Pike Run	177	16	10	Chapter 3745-4	N/A	MWH
4-001	40.7654	-84.0884	Intermittent	UNT	509	5	3	HHEI	29	Class I
4-002	40.7654	-84.0875	Perennial	UNT	265	8	5	HHEI	52	Modified Class II
5-001	40.8413	-84.1761	Ephemeral	UNT	10	5	3	HHEI	27	Class I
Total:					6,295					

**AEP Lima - Fort Wayne 138 kV Rebuild Project
WETLAND TABLE**

1/28/2022

Wetland ID	Location		Isolated?	Habitat Type	Delineated Area (acre)	ORAM	
	Latitude	Longitude				Score	Category
1-A	40.8948	-84.3051	No	PFO	0.017	26	1
1-B	40.8925	-84.2953	No	PFO	0.446	19	1
1-C	40.8685	-84.2281	No	PSS	1.079	20	1
1-D	40.8558	-84.1981	No	PSS	0.130	31	2
1-E	40.8407	-84.1754	No	PFO	0.262	21	1
1-F	40.8146	-84.1541	No	PEM	0.377	22	1
1-G	40.8111	-84.1505	No	PEM	0.024	14	1
1-H	40.8102	-84.1495	No	PEM	0.067	14	1
1-I	40.8087	-84.1479	No	PEM	0.338	25	1
1-J	40.8348	-84.1756	No	PEM	0.061	11	1
1-K	40.7986	-84.1374	No	PSS	0.073	10.5	1
1-L	40.7993	-84.1379	No	PEM	0.037	19	1
1-M	40.7935	-84.1319	No	PSS	0.145	15.5	1
1-N	40.7935	-84.1321	No	PSS	0.060	15.5	1
1-O	40.7783	-84.1160	No	PEM	0.031	19	1
1-P	40.7927	-84.1310	No	PEM	0.090	10	1

**AEP Lima - Fort Wayne 138 kV Rebuild Project
WETLAND TABLE**

1/28/2022

1-Q	40.7915	-84.1300	No	PEM	0.018	16.5	1
1-R	40.7782	-84.1151	No	PEM	1.145	24	1
1-S	40.7791	-84.1168	No	PEM	0.070	19	1
1-T	40.7804	-84.1182	No	PEM	0.221	27	1
1-U	40.7814	-84.1190	No	PEM	0.047	22	1
1-V	40.7816	-84.1193	No	PEM	0.012	21	1
1-W	40.7819	-84.1194	No	PEM	0.005	20	1
1-X	40.7819	-84.1196	No	PEM	0.018	20	1
1-Y	40.7822	-84.1197	No	PEM	0.036	22	1
1-Z	40.7759	-84.1134	No	PEM	0.119	17	1
1-AA	40.7773	-84.1149	No	PEM	0.036	14.5	1
1-AB	40.7631	-84.0932	No	PEM	0.008	14	1
1-AC	40.7631	-84.0938	No	PEM	0.050	17	1
1-AD	40.7626	-84.0864	No	PEM	0.143	13	1
1-AE (PEM)	40.7633	-84.0873	No	PEM	0.309	19.5	1
1-AE (PFO)	40.7633	-84.0869	No	PFO	0.427	19.5	1
1-AE (PSS)	40.7633	-84.0880	No	PSS	0.235	19.5	1

**AEP Lima - Fort Wayne 138 kV Rebuild Project
WETLAND TABLE**

1/28/2022

1-AF	40.7628	-84.0976	No	PEM	0.084	13	1
1-AG	40.7648	-84.1014	No	PEM	0.183	16	1
1-AH (PSS)	40.7628	-84.0999	No	PSS	0.128	27	1
1-AH (PEM)	40.7627	-84.0998	No	PEM	0.032	27	1
1-AH (PFO)	40.7631	-84.0998	No	PFO	0.252	27	1
1-AI	40.7631	-84.1001	No	PEM	0.003	19	1
1-AJ	40.7787	-84.1119	No	PFO	0.021	22	1
1-AK	40.7787	-84.1131	No	PFO	0.081	27	1
1-AL	40.8930	-84.2939	No	PEM	0.166	19	1
2-A	40.7859	-84.1238	No	PEM	0.521	25	1
2-B	40.7866	-84.1248	No	PEM	0.022	32	2
2-C	40.7748	-84.1122	No	PEM	0.419	25	1
2-D	40.7654	-84.1023	No	PEM	0.381	25	1
2-E	40.7686	-84.1056	No	PEM	0.676	23	1
2-F	40.7691	-84.1059	No	PEM	0.001	25	1
3-A	40.79054	-84.12936	No	PEM	0.044	10	1
4-A	40.76407	-84.10059	No	PEM	0.066	12	1

**AEP Lima - Fort Wayne 138 kV Rebuild Project
WETLAND TABLE**

1/28/2022

4-B (PEM)	40.76382	-84.10002	No	PEM	0.11	18	1
4-B (PFO)	40.76354	-84.1001	No	PFO	0.05	18	1
4-C	40.76361	-84.09965	No	PEM	0.26	14	1
4-D	40.76323	-84.09769	No	PFO	0.04	21	1
4-E (PFO)	40.7642	-84.08784	No	PFO	0.49	21	1
4-E (PEM)	40.76451	-84.08739	No	PEM	0.24	21	1
4-F	40.76511	-84.0891	No	PEM	0.13	17	1
4-G	40.76534	-84.08733	No	PEM	0.07	35	Modified 2
4-H	40.76552	-84.08765	No	PFO	0.08	37	Modified 2
4-I	40.76343	-84.08982	No	PFO	0.01	25	1
5-A	40.835409	-84.175686	No	PEM	0.02	11	1
5-B	40.84182	-84.17609	No	PEM	0.00	29	1
5-C	40.84106	-84.17609	No	PSS	0.00	29	1
Total:					10.710		

**APPENDIX G
SITE PHOTOS**

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-A PFO (North)



Wetland 1-A PFO (East)



Wetland 1-A PFO (South)



Wetland 1-A PFO (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-B PFO (North)



Wetland 1-B PFO (East)



Wetland 1-B PFO (South)



Wetland 1-B PFO (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-C PSS (North)



Wetland 1-C PSS (East)



Wetland 1-C PSS (South)



Wetland 1-C PSS (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-D PSS (North)



Wetland 1-D PSS (East)



Wetland 1-D PSS (South)



Wetland 1-D PSS (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-E PFO (North)



Wetland 1-E PFO (East)



Wetland 1-E PFO (South)



Wetland 1-E PFO (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-F PEM (North)



Wetland 1-F PEM (East)



Wetland 1-F PEM (South)



Wetland 1-F PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-G PEM (North)



Wetland 1-G PEM (East)



Wetland 1-G PEM (South)



Wetland 1-G PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-H PEM (North)



Wetland 1-H PEM (East)



Wetland 1-H PEM (South)



Wetland 1-H PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-I PEM (North)



Wetland 1-I PEM (East)



Wetland 1-I PEM (South)



Wetland 1-I PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-J PEM (North)



Wetland 1-J PEM (East)



Wetland 1-J PEM (South)



Wetland 1-J PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-K PSS (North)



Wetland 1-K PSS (East)



Wetland 1-K PSS (South)



Wetland 1-K PSS (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-L PEM (North)



Wetland 1-L PEM (East)



Wetland 1-L PEM (South)



Wetland 1-L PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-M PSS (North)



Wetland 1-M PSS (East)



Wetland 1-M PSS (South)



Wetland 1-M PSS (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-N PSS (North)



Wetland 1-N PSS (East)



Wetland 1-N PSS (South)



Wetland 1-N PSS (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-O PEM (North)



Wetland 1-O PEM (East)



Wetland 1-O PEM (South)



Wetland 1-O PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-P PEM (North)



Wetland 1-P PEM (East)



Wetland 1-P PEM (South)



Wetland 1-P PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-Q PEM (North)



Wetland 1-Q PEM (East)



Wetland 1-Q PEM (South)



Wetland 1-Q PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-R PEM (North)



Wetland 1-R PEM (East)



Wetland 1-R PEM (South)



Wetland 1-R PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-S PEM (North)



Wetland 1-S PEM (East)



Wetland 1-S PEM (South)



Wetland 1-S PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-T PEM (North)



Wetland 1-T PEM (East)



Wetland 1-T PEM (South)



Wetland 1-T PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-U PEM (North)



Wetland 1-U PEM (East)



Wetland 1-U PEM (South)



Wetland 1-U PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-V PEM (North)



Wetland 1-V PEM (East)



Wetland 1-V PEM (South)



Wetland 1-V PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-W PEM (North)



Wetland 1-W PEM (East)



Wetland 1-W PEM (South)



Wetland 1-W PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-X PEM (North)



Wetland 1-X PEM (East)



Wetland 1-X PEM (South)



Wetland 1-X PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-Y PEM (North)



Wetland 1-Y PEM (East)



Wetland 1-Y PEM (South)



Wetland 1-Y PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-Z PEM (North)



Wetland 1-Z PEM (East)



Wetland 1-Z PEM (South)



Wetland 1-Z PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AA PEM (North)



Wetland 1-AA PEM (East)



Wetland 1-AA PEM (South)



Wetland 1-AA PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AB PEM (North)



Wetland 1-AB PEM (East)



Wetland 1-AB PEM (South)



Wetland 1-AB PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AC PEM (North)



Wetland 1-AC PEM (East)



Wetland 1-AC PEM (South)



Wetland 1-AC PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AD PEM (North)



Wetland 1-AD PEM (East)



Wetland 1-AD PEM (South)



Wetland 1-AD PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AE PEM (North)



Wetland 1-AE PEM (East)



Wetland 1-AE PEM (South)



Wetland 1-AE PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AE PFO (North)



Wetland 1-AE PFO (East)



Wetland 1-AE PFO (South)



Wetland 1-AE PFO (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AE PSS (North)



Wetland 1-AE PSS (East)



Wetland 1-AE PSS (South)



Wetland 1-AE PSS (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AF PEM (North)



Wetland 1-AF PEM (East)



Wetland 1-AF PEM (South)



Wetland 1-AF PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AG PEM (North)



Wetland 1-AG PEM (East)



Wetland 1-AG PEM (South)



Wetland 1-AG PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AH PEM (North)



Wetland 1-AH PEM (East)



Wetland 1-AH PEM (South)



Wetland 1-AH PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AH PSS (North)



Wetland 1-AH PSS (East)



Wetland 1-AH PSS (South)



Wetland 1-AH PSS (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AH PFO (North)



Wetland 1-AH PFO (East)



Wetland 1-AH PFO (South)



Wetland 1-AH PFO (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AI PEM (North)



Wetland 1-AI PEM (East)



Wetland 1-AI PEM (South)



Wetland 1-AI PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AJ PFO (North)



Wetland 1-AJ PFO (East)



Wetland 1-AJ PFO (South)



Wetland 1-AJ PFO (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AK PFO (North)



Wetland 1-AK PFO (East)



Wetland 1-AK PFO (South)



Wetland 1-AK PFO (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 1-AL PEM (North)



Wetland 1-AL PEM (East)



Wetland 1-AL PEM (South)



Wetland 1-AL PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 2-A PEM (North)



Wetland 2-A PEM (East)



Wetland 2-A PEM (South)



Wetland 2-A PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 2-B PEM (North)



Wetland 2-B PEM (East)



Wetland 2-B PEM (South)



Wetland 2-B PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 2-C PEM (North)



Wetland 2-C PEM (East)



Wetland 2-C PEM (South)



Wetland 2-C PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 2-D PEM (North)



Wetland 2-D PEM (East)



Wetland 2-D PEM (South)



Wetland 2-D PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 2-E PEM (North)



Wetland 2-E PEM (East)



Wetland 2-E PEM (South)



Wetland 2-E PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 2-F PEM (North)



Wetland 2-F PEM (East)



Wetland 2-F PEM (South)



Wetland 2-F PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 3-A PEM (North)



Wetland 3-A PEM (East)



Wetland 3-A PEM (South)



Wetland 3-A PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 4-A PEM (North)



Wetland 4-A PEM (East)



Wetland 4-A PEM (South)



Wetland 4-A PEM (West)

Environmental Solutions & Innovations, Inc.
Photo Documentation

Client/Site Name:

AEP Lima to Fort Wayne 138 kV Rebuild
Project

Site Location:

Allen and Putnam Cos., OH

Project #:

1730



Wetland 4-B PEM (North)



Wetland 4-B PEM (East)



Wetland 4-B PEM (South)



Wetland 4-B PEM (West)

**This foregoing document was electronically filed with the Public Utilities
Commission of Ohio Docketing Information System on**

3/7/2022 6:18:40 PM

in

Case No(s). 22-0154-EL-BLN

Summary: Notice Letter of Notification Part 2 electronically filed by Hector Garcia-Santana on behalf of Ohio Power Company