

Construction Notice for Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project



PUCO Case No. 25-0030-EL-BNR

Submitted to:
The Ohio Power Siting Board
Pursuant to Ohio Administrative
Code Section 4906-6-05

Submitted by:
AEP Ohio Transmission Company, Inc.

February 4, 2025

CONSTRUCTION NOTICE

**AEP Ohio Transmission Company, Inc.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project**

4906-6-05

AEP Ohio Transmission Company, Inc. (“AEP Ohio Transco” or the “Company”) provides the following information to the Ohio Power Siting Board (“OPSB”) pursuant to Ohio Administrative Code Section 4906-6-05.

4906-6-5(B) General Information

B(1) Project Description

The name of the project and applicant's reference number, names and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a Construction Notice.

The Company proposes the Cole-Pleasant Prairie 345 kV Transmission Line Project (the “Project”) in Prairie Township, Franklin County, Ohio. The Project will provide a 345 kV interconnection to the Pleasant Prairie Solar facility (OPSB Case Number 20-1679-EL-BGN), proposed by Pleasant Prairie Solar Energy, LLC, an Independent Power Producer (“IPP”). The Project will install approximately 0.1 mile of 345 kV line, extending north and west out of the Cole Station to connect to a Point of Interconnection (“POI”) with the IPP’s 345 kV transmission line (OPSB Case Number 22-0122-EL-BLN). The Project will be located on property owned by the Company. The location of the Project is shown on Figure 1 and Figure 2 in **Appendix A**.

The Project meets the requirements for a Construction Notice (“CN”) because it is within the types of projects defined by item (1)(a) of Appendix A to O.A.C. 4906-1-01, *Application Requirement Matrix for Electric Power Transmission Lines*. This item states:

(1) New construction, extension, or relocation of single or multiple circuit electric power transmission line(s), or upgrading existing transmission or distribution line(s) for operation at a higher transmission voltage, as follows:

(a) Line(s) not greater than 0.2 miles in length.

The Project has been assigned PUCO Case No. 25-0030-EL-BNR

B(2) Statement of Need

If the proposed project is an electric power transmission line or gas or natural gas transmission line, a statement explaining the need for the proposed facility.

Pleasant Prairie Solar Energy, LLC plans to build a 200 MW solar generation facility in Franklin County, Ohio. As part of the AE2-214 IPP Interconnection Service Agreement, the Company must connect

AEP Ohio Transmission Company, Inc.
February 2025

Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project
25-0030-EL-BNR

transmission assets to the proposed solar generation facility. To address the IPP's plans, the Company will install approximately 0.1 mile of new 345 kV transmission line to connect to the IPP's POI.

Failure to move forward with the proposed Project will result in the Company's inability to serve the customer's generation interconnection request, thereby jeopardizing the customer's required in-service date per the FERC approved Interconnection Service Agreement.

The Project has been assigned a PJM upgrade number of n5676.2. The Project was not included in the Company's 2024 Long Term Forecast Report because the solution was not known at the time of filing.

B(3) Project Location

The applicant shall provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the Project area.

The Project is located in Prairie Township, Franklin County, Ohio. Figures 1 and 2 in Appendix A show the location of the proposed Project in relation to existing transmission facilities.

B(4) Alternatives Considered

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

The Project is located entirely on land owned by the Company. The Project requires installing approximately 0.1 mile of 345 kV electric transmission line from Cole Station and will require two structures located north and west of the station fence to interconnect with an IPP solar facility. Due to the short nature of the generation tie line and the IPP's proposed transmission line interconnection, no other alternatives were considered. Other alternatives would require impacting additional neighboring properties and would add additional transmission length to the Project without any additional benefit. The proposed Project will not impact wetlands, streams, or any known cultural resource areas eligible for the National Register of Historic Places ("NRHP"). Therefore, the Project represents the most suitable location and is the most appropriate solution for meeting the Company's and IPP's needs in the area.

B(5) Public Information Program

The applicant shall describe its public information program to inform affected property owners and tenants of the nature of the project and the proposed timeframe for project construction and restoration activities.

The Company maintains a website (<http://aeptransmission.com/ohio/>) on which an electronic copy of this CN is available. An electronic copy of the CN will be served to the public library and each political subdivision affected by this Project.

B(6) Construction Schedule

The applicant shall provide an anticipated construction schedule and proposed in-service date of the project.

Construction is planned to start in June of 2025 and the anticipated in-service date will be October of 2025.

B(7) Area Map

The applicant shall provide a map of at least 1:24,000 scale clearly depicting the facility with clearly marked streets, roads, and highways, and an aerial image.

Figure 1 in **Appendix A** provides a topographical map (Galloway, OH topographic quadrangle) of existing and proposed facilities at 1:24,000, and Figure 2 in **Appendix A** provides an aerial image from 2023 showing roads and highways, clearly marked with Project components.

B(8) Property Agreements

The applicant shall provide a list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the facility and a list of the additional properties for which such agreements have not been obtained.

The Project will be entirely located on property currently owned by AEP Ohio Transco (Parcel No. 240-006626-00). Therefore, no new ROW or easements will be required to be obtained on property owned by private landowners.

B(9) Technical Features

The applicant shall describe the following information regarding the technical features of the Project:

B(9)(a) Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The transmission line construction is estimated to include the following:

Voltage:	345 kV
Conductors:	2 – 954kcm 54/7 ACSR Cardinal
Static Wire:	AFL: DNO-11843 (96-ct fiber)
Insulators:	Polymer Dead End Insulators with Corona Ring
ROW Width:	150 Feet
Structure Types:	Two (2) single circuit galvanized steel poles, custom deadend structures on drilled pier concrete foundations

B(9)(b) Electric and Magnetic Fields

For electric power transmission lines that are within one hundred feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line.

This Project is not located within 100 feet of any occupied residences or institutions. Therefore, this section is not applicable.

B(9)(c) Project Cost

The estimated capital cost of the project.

The cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately \$2,105,000 using a Class 4 estimate. The costs for this Project will be recovered through total reimbursement by the IPP.

B(10) Social and Economic Impacts

The applicant shall describe the social and ecological impacts of the project:

B(10)(a) Land Use Characteristics

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

The Project is located in Prairie Township, Franklin County, Ohio. The Franklin County Auditor website lists the land use of this parcel as “Cash Grain/Gen. Farm”. Field observations indicated that the Project area is comprised of industrial land (existing substation; 2.3 acres) and old field habitat (0.9 acre). The Company anticipates that no tree clearing will be required for the new ROW.

No residences are located within 100 feet of the Project area. No cemeteries, churches, schools, or other community facilities are located within 1,000 feet of the Project area.

B(10)(b) Agricultural Land Information

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

The Project area consists of industrial land (existing substation; 2.3 acres) and old field habitat (0.9 acre). The Franklin County Auditor’s Office was contacted to obtain information about Agricultural District Lands and received a response on January 9, 2025. which identified that the parcel located within the Project area is not enrolled in the Agricultural District Land program.

B(10)(c) Archaeological and Cultural Resources

Provide a description of the applicant’s investigation concerning the presence or absence of significant archaeological or cultural resources that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

Phase I archaeological and history/architectural surveys were conducted by the Company’s consultant for the previous Cole Station project in 2016. This survey identified 27 archaeological sites within the previous survey area. Of these, 16 were located within the current Project survey area. These sites were recommended not eligible for inclusion on the National Register of Historic Places (“NRHP”) and the State Historic Preservation Office (“SHPO”) agreed with these recommendations in a letter dated October 26, 2016. The Company’s consultant conducted a literature review and submitted a Project-specific letter report to the SHPO on June 27, 2024. In a letter dated July 26, 2024 (**Appendix B**), the SHPO stated that they continue to agree with these recommendations and no additional archaeological survey is needed. No new architectural resources were identified within the Area of Potential Effect (“APE”). Based on the information provided, the SHPO agreed that the Project, as proposed, will have no effect on historic properties. Additionally, the SHPO stated that no further coordination with their office is necessary, unless the Project changes or unless new or additional cultural resources are discovered during the implementation of the Project.

B(10)(d) Local, State, and Federal Agency Correspondence

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

Best management practices (BMPs) will be implemented and maintained to minimize erosion and control sediment to protect surface water quality during storm events. Because less than one acre of land disturbance will be required for the Project, a project-specific Storm Water Pollution Prevention Plan (“SWPPP”) will not be required and a Notice of Intent (“NOI”) will not be required to be filed with the Ohio Environmental Protection Agency (“OEPA”) for authorization of construction storm water discharges under General Permit OHC000006.

There are no wetlands, streams, or open waters located within the Project area (see Ecological Survey Report provided in **Appendix C**). Therefore, the Project will not require a Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers (“USACE”) or a Section 401 Water Quality Certification or Isolated Wetland Permit from the OEPA.

There is a Federal Emergency Management Agency (“FEMA”)-mapped 100-year floodplain and floodway located just west of the Project. However the Project does not involve placement of any structures or other permanent fill within the FEMA-mapped 100-year floodplain or floodway. Therefore, no floodplain permitting is required for the Project.

There are no other known local, state, or federal permitting requirements that must be met prior to commencement of the Project.

B(10)(e) Threatened, Endangered, and Rare Species

Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

As part of the ecological study completed for the Project, a coordination letter was submitted to the U.S. Fish and Wildlife Service (“USFWS”) Ohio Ecological Services Field Office seeking technical assistance on the Project for potential impacts to threatened or endangered species. In their June 20, 2024 response letter, the USFWS (**Appendix B**) stated that due to the project type, size, and location, they do not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.

An environmental review request letter was submitted to the Ohio Department of Natural Resources (“ODNR”) Office of Real Estate and a response letter was received on July 5, 2024 (**Appendix B**). According to the ODNR, the Indiana bat (*Myotis sodalis*; state-listed and federally listed endangered), little brown bat (*Myotis lucifugus*; state-listed endangered), northern long-eared bat (*Myotis septentrionalis*; state-listed endangered), and tricolored bat (*Perimyotis subflavus*; state-listed endangered and federally proposed endangered) occur statewide in Ohio and the Project is located within the vicinity of records for the Indiana bat and northern long-eared bat. These species roost in trees during the summer months and the little brown bat and tricolored bat also roost in buildings. The ODNR recommends tree 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 diameter at breast height of ≥ 20 inches if possible. No potentially suitable summer roosting habitat for these species was identified within the Project area by the Company’s consultant.

The ODNR also recommended 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. If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the Project area, the ODNR requested that this information be sent to them for project recommendations. As seen on Figure 4 in the Ecological Survey Report (**Appendix C**), the entirety of the Project area is located within a mapped area of karst geology (Figure 4, **Appendix A**). However, no abandoned or active underground mines, underground openings, caves, or any other potentially suitable bat hibernacula were observed within the Project area during the field surveys completed by the Company’s consultant. Therefore, no impacts to potential bat hibernacula are anticipated. As stated above, no tree clearing is anticipated to be required for the Project. Additionally, no buildings will be removed as part of the Project. If any tree clearing is required for the Project, it will be completed between October 1 and March 31. Therefore, no impacts to the Indiana bat, northern long-eared bat, little brown bat, or tricolored bat are anticipated.

The response letter received from the ODNR Office of Real Estate states that the Project is within the range of the following state-listed endangered and/or threatened mussel species: clubshell (*Pleurobema clava*; state-listed and federally listed endangered), rayed bean (*Villosa fabalis*; state-listed and federally listed endangered), northern riffleshell (*Epioblasma torulosa rangiana*; state-listed and federally listed

endangered), snuffbox (*Epioblasma triquetra*; state-listed and federally listed endangered), purple cat's paw (*Epioblasma obliquata obliquata*; state-listed and federally listed endangered), rabbitsfoot (*Quadrula cylindrica cylindrica*; state-listed endangered and federally listed threatened), elephant-ear (*Elliptio crassidens crassidens*; state-listed endangered), pocketbook (*Lampsilis ovata*; state-listed endangered), long solid (*Fusconaia maculata maculata*; state-listed endangered), washboard (*Megaloniais nervosa*; state-listed endangered), Ohio pigtoe (*Pleurobema cordatum*; state-listed endangered), pondhorn (*Unio merus tetralasmus*; state-listed threatened), and salamander mussel (*Simpsonia ambigua*; state-listed endangered and proposed federally endangered). However, due to the Project location, and that there is no in-water work proposed in a perennial stream, the ODNR states that this Project is not likely to impact these species.

The ODNR response letter also states that the Project is within the range of the following state-listed endangered and/or threatened fish species: goldeye (*Hiodon alosoides*; state-listed endangered), shortnose gar (*Lepisosteus platostomus*; state-listed endangered), Iowa darter (*Etheostoma exile*; state-listed endangered), spotted darter (*Etheostoma maculatum*; state-listed endangered), northern brook lamprey (*Ichthyomyzon fossor*; state-listed endangered), tongue-tied minnow (*Exoglossum laurae*; state-listed endangered), popeye shiner (*Notropis ariommus*; state-listed endangered), lake chubsucker (*Erimyzon sucetta*; state-listed threatened), and paddlefish (*Polyodon spathula*; state-listed threatened). However, the ODNR stated that if no in-water work is proposed in a perennial stream, this project is not likely to impact these species.

B(10)(f) Areas of Ecological Concern

Provide a description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

There are no federal wilderness areas, wildlife refuges, or designated critical habitat within the vicinity of the Project area (**Appendix B**). Additionally, the ODNR Office of Real Estate response letter indicates that they are not aware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas that are located within a one-mile radius of the Project area (**Appendix B**).

The FEMA Flood Insurance Rate Maps with coverage of the Project area were consulted to identify any floodplains/flood hazard areas that have been mapped in the Project area (specifically, map numbers 39049C0283K and 39097C0200E). Based on these maps, no structures or other permanent fill will be placed within mapped FEMA-mapped floodplains or floodways.

An ecological resources survey and wetland and waterbody delineation study was completed by the Company's consultant for the Project area in June of 2024. The Ecological Survey Report is included in **Appendix C**. No wetlands, streams, or open waters were observed in the proposed ROW or access routes.

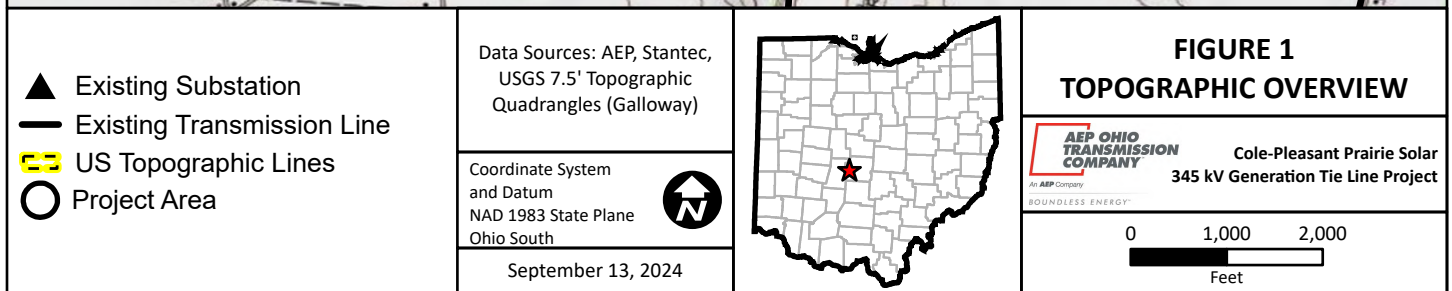
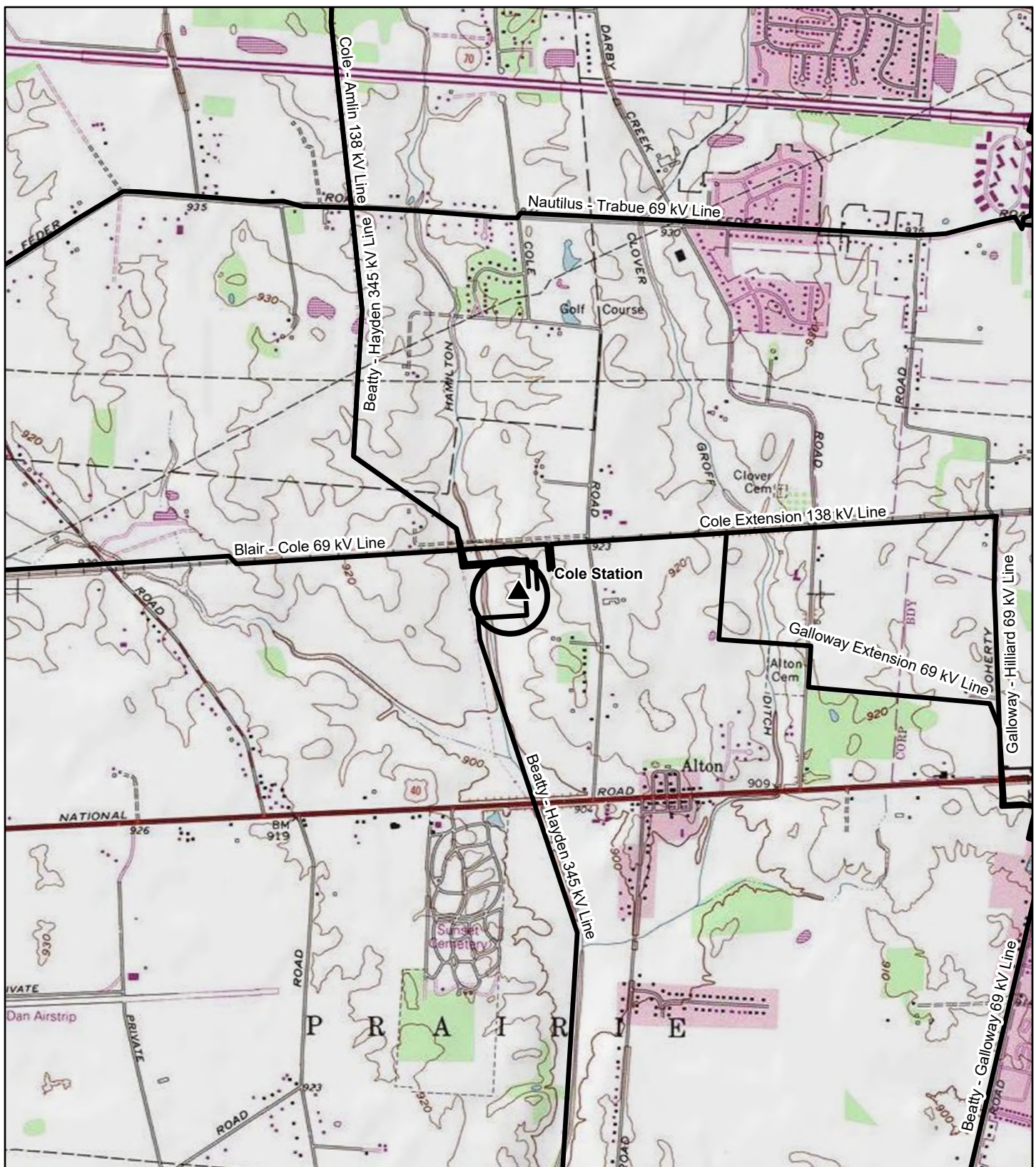
CONSTRUCTION NOTICE FOR COLE-PLEASANT PRAIRIE SOLAR 345 kV GENERATION TIE LINE PROJECT

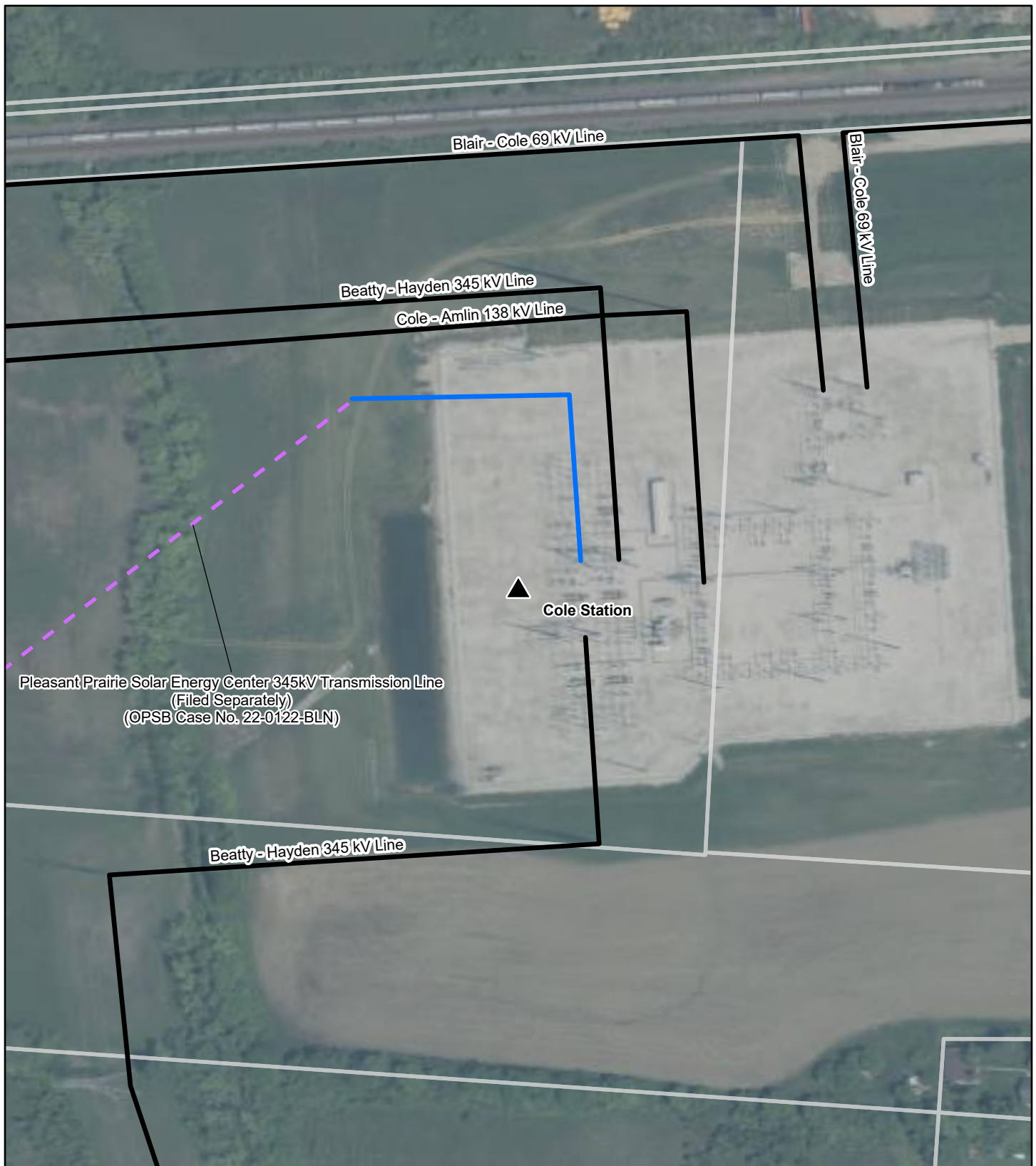
for the Project. See **Appendix C** for more information regarding the habitats and land uses observed within the Project area.

B(10)(g) Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

To the best of the Company's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

APPENDIX A Project Figures





LEGEND:

- ▲ Existing Substation
- Proposed Transmission Line
- - - Proposed Transmission Line (Filed Separately)
- Existing Transmission Line
- Parcel Boundary

Data Sources: AEP, Stantec,
NAIP Imagery, 2023

Coordinate System
and Datum
NAD 1983 State Plane
Ohio South



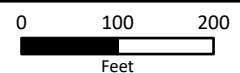
October 03, 2024



FIGURE 2 AERIAL MAP



Cole-Pleasant Prairie Solar
345 kV Generation Tie Line Project



APPENDIX B Agency Correspondence



In reply, refer to
2024-FRA-61701

July 26, 2024

Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212
rweller@wellercrm.com

**RE: Cole-Pleasant Prairie Solar 345kV Generation Tie Line Project, Pleasant Township,
Franklin County, Ohio**

Dear Mr. Weller:

This letter is in response to the correspondence received on June 27, 2024, regarding the proposed Cole-Pleasant Prairie Solar 345kV Generation Tie Line Project, Pleasant Township, Franklin County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board (OPSB) rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Cultural Resource Management Review for the Cole-Pleasant Prairie Solar 345kV Generation Tie Line Project in Pleasant Township, Franklin County, Ohio (BPID P201807001; WO T10678686002)* by Ryan J. Weller (Weller & Associates, Inc. 2024). This project is related to the proposed construction of a new segment of the 345kV transmission line to connect the existing Cole Road Station to a new solar substation (Darby Creek). The proposed transmission line will be approximately 0.24 km (0.15 mi) in length and include the installation of two new transmission line poles.

A literature review was completed as part of the investigations. The entirety of the project area was previously investigated for cultural resources through the *Phase I Cultural Resource Management Investigations for American Electric Power's Proposed Amlin-Cole Transmission Upgrade Project in Washington, Norton, Prairie, and Brown Townships, Franklin County, Ohio* by Ryan J. Weller (Weller and Associates, Inc. 2016). This previous survey identified twenty-seven (27) Ohio Archaeological Inventory (OAI) sites (33FR3008-33FR3033). Of these, sixteen (16) were located within the current project area: OAI sites 33FR3008-3010, 33FR3014, 33FR3016-33FR3020, 33FR3023, and 33FR3026-33FR3031. These sites were recommended not eligible for inclusion on the National Register of Historic Places (NRHP) and our office agreed with these recommendations in a letter dated October 26, 2016. Our office continues to agree with these recommendations and no additional archaeological survey is needed. No new architectural resources were identified within the Area of Potential Effect

2024-FRA-61701

July 26, 2024

Page 2

(APE).

Based on the information provided, we agree the project, as proposed, will have no effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional cultural resources are discovered during the implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me by e-mail at cgullett@ohiohistory.org. Thank you for your cooperation.

Sincerely,



Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No: 1103785

United States Department of the Interior



FISH AND WILDLIFE SERVICE

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



June 20, 2024

Project Code: 2024-0092868

Dear Daniel Godec:

The U.S. Fish and Wildlife Service (Service) 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 effects 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: Due to the project, type, size, and location, we do not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat. If there are any project modifications during the term of this action, or additional information for listed or proposed species or their critical habitat becomes available, or if new information reveals effects of the action that were not previously considered, then please contact us for additional project review.

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,

Erin Knoll
Field Office Supervisor



Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate

Tara Paciorek, Chief

2045 Morse Road – Bldg. E-2

Columbus, Ohio 43229

Phone: (614) 265-6661

Fax: (614) 267-4764

July 5, 2024

Daniel Godec
Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati, Ohio 45241

Re: 24-0856_Cole-Pleasant Prairie Solar 345 kV Generation Tie Line

Project: The proposed project involves the construction of a new segment of 345 kV transmission line just outside of the existing Cole Road Station to provide a 345 kV interconnection to a new solar substation, Darby Creek, owned by Invenergy.

Location: The proposed project is located in Prairie Township, Franklin County, Ohio.

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

Natural Heritage Database: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. Records searched date from 1980.

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.

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 project is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute

presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, 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 endangered 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 bat species 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. The DOW recommends tree 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 \geq 20 if possible.

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 & NORTHERN LONG-EARED 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 Eileen Wyza 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 following listed mussel species.

Federally Endangered

clubshell (*Pleurobema clava*)
rayed bean (*Villosa fabalis*)
northern riffleshell (*Epioblasma torulosa rangiana*)
snuffbox (*Epioblasma triquetra*)
purple cat’s paw (*Epioblasma o. obliquata*)

Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered

elephant-ear (*Elliptio crassidens crassidens*)
pocketbook (*Lampsilis ovata*)
long solid (*Fusconaia maculata maculate*)
washboard (*Megalonaias nervosa*)
Ohio pigtoe (*Pleurobema cordatum*)

State Threatened

pondhorn (*Unio merus tetralasmus*)
Salamander Mussel (*Simpsonaias ambigua*)

Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The project is within the range of the following listed fish species.

State Endangered

goldeye (*Hiodon alosoides*)
shortnose gar (*Lepisosteus platostomus*)
Iowa darter (*Etheostoma exile*)
spotted darter (*Etheostoma maculatum*)
northern brook lamprey (*Ichthyomyzon fossor*)
tonguetied minnow (*Exoglossum laurae*)
popeye shiner (*Notropis ariommus*)

State Threatened

lake chubsucker (*Erimyzon sucetta*)
paddlefish (*Polyodon spathula*)

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.

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.

Thank you for affording us the opportunity to comment.

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.

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

APPENDIX C Ecological Survey Report



**Cole-Pleasant Prairie Solar 345 kV
Generation Tie Line Project,
Franklin County, Ohio**

Ecological Survey Report

Prepared for:

Kiewit Power Constructors Co.
8900 Renner Boulevard
Lenexa, KS 66219


Prepared by:

Stantec Consulting Services Inc.
10200 Alliance Road, Suite 300
Cincinnati, OH 45242

July 30, 2024

Sign-off Sheet

This document entitled Cole – Pleasant Prairie Solar 345 kV Generation Tie Line Project Ecological Survey Report was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Kiewit Power Constructors Co. (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by 
(signature)

Aaron Kwolek

Reviewed by 
(signature)

Kate Bomar

Reviewed by 
(signature)

Dan Godec

Table of Contents

1.0	INTRODUCTION	1
2.0	METHODS.....	2
2.1	WETLAND DELINEATION.....	2
2.2	STREAM DELINEATION.....	2
2.3	RARE SPECIES	2
3.0	RESULTS	3
3.1	TERRESTRIAL HABITAT	3
3.2	WETLANDS	4
3.3	STREAMS	4
3.4	OPEN WATERS.....	4
3.5	RARE, THREATENED, OR ENDANGERED SPECIES HABITAT.....	5
4.0	CONCLUSIONS AND RECOMMENDATIONS.....	11
5.0	REFERENCES.....	13

LIST OF TABLES

Table 1. Vegetation Communities and Land Cover Found within the Cole – Pleasant Prairie Solar 345 kV Generation Tie Line Project Area, Franklin County, Ohio	3
Table 2. Summary of Potential Federally Listed and Ohio State-Listed Species within the Cole-Pleasant Prairie 345 kV Generation Tie Line Project Area, Franklin County, Ohio.....	5

LIST OF APPENDICES

APPENDIX A	FIGURES	A.1
Figure 1 – Project Location Map.....		A.1
Figure 2 – Wetland and Waterbody Delineation Map		A.2
Figure 3 – Habitat Assessment Map		A.3
Figure 4 – Bat Hibernacula Desktop Study Map.....		A.4
APPENDIX B	AGENCY CORRESPONDENCE	B.1
APPENDIX C	REPRESENTATIVE PHOTOGRAPHS	C.1
Wetland and Waterbody Photographs.....		C.1
Habitat Photographs		C.2
APPENDIX D	DATA FORMS	D.1
Wetland Determination Data Forms		D.1

Introduction
July 30, 2024

1.0 INTRODUCTION

Kiewit Power Constructors Co. (Kiewit) is proposing construction activities associated with the Cole – Pleasant Prairie Solar 345 kV Generation Tie Line Project (the Project). Kiewit is proposing to construct a new segment of 345 kV transmission line just outside of the existing Cole Road Station to provide a 345 kV interconnection to a new solar substation, Darby Creek, owned by Invenergy (Figure 1, Appendix A). The Project area was surveyed for wetlands, waterbodies, open water features, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) biologists on June 6, 2024. The approximate locations of features located up to 50 feet outside of the Project area were also recorded during the field surveys, where landowner access was permitted. However, no data forms were collected on features that did not extend into the Project area. The approximate locations of these features are shown on the Figure 2 maps in Appendix A as “approximate” wetlands, streams (waterways), open waters, and upland drainage features.

Methods
July 30, 2024

2.0 METHODS

2.1 WETLAND DELINEATION

Prior to completing the field surveys, a desktop review of the Project area was conducted using U.S. Geological Survey (USGS) topographic maps, National Wetlands Inventory (NWI) mapping, National Hydrography Dataset (NHD) mapping, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, and aerial imagery mapping. Stantec completed a wetland delineation study in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE 2010). Wetland categories were classified using the Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001).

2.2 STREAM DELINEATION

Streams that demonstrated a continuously defined channel (bed and bank), ordinary high-water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project area, per the protocols outlined in the USACE's Guidance on Ordinary High Water Mark Identification (Regulatory Guidance Letter, No. 05-05; USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the Federal Register/Vol. 67, No. 10 (USACE 2002). Functional assessment of streams within the Project area was based on completion of the Ohio Environmental Protection Agency's (OEPA) Headwater Habitat Evaluation Index (HHEI; OEPA 2020) and/or Qualitative Habitat Evaluation Index (QHEI; OEPA 2006) data forms. The centerline and/or the OHWM locations of each waterway were identified and surveyed using a handheld sub-meter accuracy global positioning system (GPS) unit and mapped with GIS software. Additionally, the locations of upland drainage features (which lacked a continuously defined bed and bank/OHWM) identified within the Project area were also recorded with a sub-meter accuracy GPS unit during the field surveys.

2.3 RARE SPECIES

Prior to conducting the field surveys, Stantec contacted the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) for information regarding rare, threatened, or endangered species and their habitats of concern within the vicinity of the Project area (Appendix B – Agency Correspondence). To assess potential impacts to rare, threatened, or endangered species, Stantec scientists conducted a pedestrian reconnaissance of the Project area, collected information on existing habitats and land uses within the Project area, and assessed the potential for these habitats and land uses to be used by these species.

Results
July 30, 2024

3.0 RESULTS

3.1 TERRESTRIAL HABITAT

Stantec completed field surveys for potentially suitable habitats for threatened and endangered species within the Project area on June 6, 2024. Figure 3 (Appendix B) shows the land cover types, vegetation communities, and any identified rare, threatened, or endangered species habitats observed within the Project area during the habitat assessment surveys. Representative photographs of the vegetation communities/habitats and land cover types identified within the Project area are included in Appendix D of this report (photo locations are shown on Figure 3 in Appendix B). Information regarding the vegetation communities/habitats and land cover types identified within the Project area are provided in Table 1.

Table 1. Vegetation Communities and Land Cover Found within the Cole – Pleasant Prairie Solar 345 kV Generation Tie Line Project Area, Franklin County, Ohio

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Old Field	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa). Dominant species included tall fescue (<i>Schedonorus arundinaceus</i>), orchardgrass (<i>Dactylis glomerata</i>), Kentucky bluegrass (<i>Poa pratensis</i>), Canada goldenrod (<i>Solidago canadensis</i>), and daisy fleabane (<i>Erigeron annuus</i>).	No	18.1
Existing Gravel Road	Extreme Disturbance/Existing Gravel Road (little to no vegetation is present in these habitats).	No	1.2
Existing Paved Road	Extreme Disturbance/Existing Paved Road (little to no vegetation is present in these habitats).	No	0.3
Industrial Land	Extreme Disturbance/Existing Substation (little to no vegetation is present in these habitats).	No	12.0
TOTAL			31.6

Results

July 30, 2024

3.2 WETLANDS

No wetlands were identified within the Project area during Stantec's June 6, 2024, site visit. Four wetland determination sample point locations were evaluated within areas most likely to be a wetland within the Project area. These areas did not meet the required criteria of a wetland. Figure 2 (Appendix A) shows the wetland determination sample point locations within the Project area and representative photographs are included in Appendix C of this report (photo locations are shown on Figure 2, Appendix A). The completed wetland determination data forms are included in Appendix D.

No National Wetlands Inventory (NWI) mapped features are located within the Project area.

3.3 STREAMS

No streams were identified within the Project area during Stantec's June 6, 2024, site visit. Additionally, there are no National Hydrography Dataset (NHD)-mapped streams located within the Project area.

3.4 OPEN WATERS

One open water feature (Open Water 1) totaling 0.86 acres was delineated within the Project area during the field surveys completed on June 6, 2024. Open Water 1 is a constructed stormwater pond located on the west end of the existing Cole Station. Figure 2 (Appendix A) shows the Open Water 1 location within the Project area and representative photographs are included in Appendix C of this report (photo locations are shown on Figure 2, Appendix A).

Results
July 30, 2024

3.5 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 2. Summary of Potential Federally Listed and Ohio State-Listed Species within the Cole-Pleasant Prairie 345 kV Generation Tie Line Project Area, Franklin County, Ohio

Common Name/ Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
Mammals						
Indiana Bat/ <i>Myotis sodalis</i>	E	E	<p>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 2007; USFWS 2024b). 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).</p>	<p>No potentially suitable winter hibernacula were observed within the Project area. However, potentially suitable summer foraging and roosting habitat (old field habitat with scattered trees) was observed within the Project area.</p>	<p>ODNR – The Project is within the vicinity of records of the Indiana bat. Additionally, the entire state of Ohio lies within the range of the Indiana bat. If trees are present within the Project area, and trees must be cut, the ODNR 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 diameter at breast height (dbh) ≥ 20 inches if possible. Because presence of a state endangered bat species has been established in this area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with the ODNR. In addition, the ODNR recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If the habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the Project area, please send this information to the ODNR for project-specific recommendations. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this Project is not likely to impact this species.</p> <p>USFWS – Due to the project, type, size, and location, the USFWS does not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.</p>	<p>Potentially suitable summer foraging and roosting habitat was observed within old field habitat with scattered trees within the Project area. It is anticipated that all required tree clearing will take place between October 1 and March 31. If any summer tree clearing is required, Kiewit and/or AEP will coordinate with the ODNR and proceed accordingly with agency recommendations to avoid impacts to this species. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec. The desktop assessment identified an area of karst geology that encompasses the entirety of the Project area (Appendix A, Figure 4). However, no mine openings, caves, or any other potentially suitable hibernacula were observed within the Project area during the field surveys completed by Stantec.</p> <p>Avoidance Dates: April 1 – September 30</p>
Northern Long-eared Bat/ <i>Myotis septentrionalis</i>	E	E	<p>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 2022). 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).</p>	<p>No potentially suitable winter hibernacula were observed within the Project area. However, potentially suitable summer foraging and roosting habitat (old field habitat with scattered trees) was observed within the Project area.</p>	<p>ODNR – The Project is within the vicinity of records of the northern long-eared bat. Additionally, the entire state of Ohio lies within the range of the northern long-eared bat. If trees are present within the Project area, and trees must be cut, the ODNR 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 inches if possible. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with the ODNR. In addition, the ODNR recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If the habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the Project area, please send this information to the ODNR for project-specific recommendations. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this Project is not likely to impact this species.</p>	<p>Potentially suitable summer foraging and roosting habitat was observed within old field habitat with scattered trees within the Project area. It is anticipated that all required tree clearing will take place between October 1 and March 31. If any summer tree clearing is required, Kiewit and/or AEP will coordinate with the ODNR and proceed accordingly with agency recommendations to avoid impacts to this species. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec. The desktop assessment identified an area of karst geology that encompasses the entirety of the Project area (Appendix A, Figure 4). However, no mine openings, caves, or any other potentially suitable hibernacula were observed within the Project area during the field surveys completed by Stantec.</p> <p>Avoidance Dates: April 1 – September 30</p>

COLE – PLEASANT PRAIRIE SOLAR 345 KV GENERATION TIE LINE PROJECT ECOLOGICAL SURVEY REPORT

Results
July 30, 2024

Common Name/ Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
					USFWS – Due to the project, type, size, and location, we do not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.	
Little Brown Bat/ <i>Myotis lucifugus</i>	E	N/A	The little brown bat is found throughout Ohio. This species seems to prefer to forage over water but also forages among trees in rather open areas (Harvey et al. 1999). During summer, it typically inhabits buildings, attics, church belfries, barns and outbuildings, and occasionally more natural habitats such as sloughing bark of a dead tree. During summer, two types of roosts are utilized: day roosts and night roosts. Day roosts are the maternity colony roost, while little brown bats often roost in other areas where they rest and congregate to digest their food in between foraging bouts. In Ohio, this species typically utilizes caves and mines as hibernacula, although at least one hibernaculum was found to be located in an attic of an old building (Brack et al. 2010).	No potentially suitable winter hibernacula were observed within the Project area. However, potentially suitable summer foraging and roosting habitat (old field habitat with scattered trees) was observed within the Project area.	ODNR – The entire state of Ohio lies within the range of the little brown bat. If trees are present within the Project area, and trees must be cut, the ODNR 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 inches if possible. In addition, the ODNR recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If the habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the Project area, please send this information to the ODNR for project-specific recommendations. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this Project is not likely to impact this species. USFWS – No comments received .	Potentially suitable summer foraging and roosting habitat was observed within old field habitat with scattered trees within the Project area. It is anticipated that all required tree clearing will take place between October 1 and March 31. If any summer tree clearing is required, Kiewit and/or AEP will coordinate with the ODNR and proceed accordingly with agency recommendations to avoid impacts to this species. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec. The desktop assessment identified an area of karst geology that encompasses the entirety of the Project area (Appendix A, Figure 4). However, no mine openings, caves, or any other potentially suitable hibernacula were observed within the Project area during the field surveys completed by Stantec. Avoidance Dates: April 1 – September 30
Tricolored Bat/ <i>Perimyotis subflavus</i>	E	PE	The tricolored bat is found throughout Ohio. This species has been found to forage above and within a variety of habitats, including woodlands, agricultural fields, grassy areas, and over streamside vegetation (Sparks et al. 2011). Maternity colonies have often been found within clusters of dead leaves, hanging in trees. Maternity colonies have also been found in or on buildings. Little is known of male tricolored bats in summer, but it is thought that they are probably solitary and spend their days in similar situations, as well as crevices, caves and mines (Brack et al. 2010). In Ohio, this species typically utilizes caves and mines as hibernacula, utilizing a variety of situations, including very cold areas near cave entrances to deeper passages that seem to be too warm for other species of bats (Brack et al. 2010).	No potentially suitable winter hibernacula were observed within the Project area. However, potentially suitable summer foraging and roosting habitat (old field habitat with scattered trees) was observed within the Project area.	ODNR – The entire state of Ohio lies within the range of the tricolored bat. If trees are present within the Project area, and trees must be cut, the ODNR 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 inches if possible. In addition, the ODNR recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If the habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the Project area, please send this information to the ODNR for project-specific recommendations. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this Project is not likely to impact this species. USFWS – Due to the project, type, size, and location, the USFWS does not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.	Potentially suitable summer foraging and roosting habitat was observed within old field habitat with scattered trees within the Project area. It is anticipated that all required tree clearing will take place between October 1 and March 31. If any summer tree clearing is required, Kiewit and/or AEP will coordinate with the ODNR and proceed accordingly with agency recommendations to avoid impacts to this species. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec. The desktop assessment identified an area of karst geology that encompasses the entirety of the Project area (Appendix A, Figure 4). However, no mine openings, caves, or any other potentially suitable hibernacula were observed within the Project area during the field surveys completed by Stantec. Avoidance Dates: April 1 – September 30
Mussels						
Clubshell/ <i>Pleurobema clava</i>	E	E	This is a species of small to medium-sized rivers and streams; generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle, and cannot tolerate mud or slackwater conditions (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the clubshell mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – Due to the project, type, size, and location, the USFWS does not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.

COLE – PLEASANT PRAIRIE SOLAR 345 KV GENERATION TIE LINE PROJECT ECOLOGICAL SURVEY REPORT

Results
July 30, 2024

Common Name/ Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
Rayed Bean/ <i>Villosa fabalis</i>	E	E	Habitat includes gravel or sandy substrate, especially in areas of thick roots of aquatic plants, and increased substrate stability (NatureServe 2024; Parmalee and Bogan 1998). Rayed bean can be associated with shoal or riffle areas, and in shallow, wave-washed areas of glacial lakes. It is generally found in smaller, headwater creeks, but sometimes in larger rivers and open-water bodies. It can occur in shallow riffles or in lakes with water depths up to four feet. It has been found in riffles, generally in vegetation, and deeply buried in sand and gravel bound together by roots (Parmalee and Bogan 1998).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of rayed bean mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – Due to the project, type, size, and location, the USFWS does not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Northern Riffleshell/ <i>Epioblasma torulosa rangiana</i>	E	E	This species inhabits riffles in small to large streams with swift current and a substrate of firmly packed fine gravel and sand (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the northern riffleshell mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – Due to the project, type, size, and location, the USFWS does not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Snuffbox/ <i>Epioblasma triquetra</i>	E	E	Occurs in medium-sized streams to large rivers generally on mud, rocky, gravel, or sand substrates in flowing water. Often deeply buried in substrate and overlooked by collectors (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the snuffbox mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – Due to the project, type, size, and location, the USFWS does not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Purple Cat's Paw/ <i>Epioblasma obliquata obliquata</i>	E	E	Found in Lake Erie tributaries, Ohio River tributaries, and headwater and small inland streams (ODNR 2020).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the purple cat's paw mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – Due to the project, type, size, and location, the USFWS does not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Rabbitsfoot/ <i>Quadrula cylindrica cylindrica</i>	E	T	The typical habitat for this species is small to medium rivers with moderate to swift currents, and in smaller streams it inhabits bars or gravel and cobble close to the fast current. Found in medium to large rivers in sand and gravel shoals (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the rabbitsfoot mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – Due to the project, type, size, and location, the USFWS does not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Elephant-ear/ <i>Elliptio crassidens crassidens</i>	E	N/A	An inhabitant of channels in large creeks to rivers with moderate to swift currents, primarily on sand and limestone or rock substrates (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the elephant-ear mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Pocketbook/ <i>Lampsilis ovata</i>	E	N/A	Very generalized in habitat preference, adapting well to both impoundment situations as well as free-flowing, shallow rivers. Usually found in moderate to strong current, it can survive in standing water. The most suitable substrate consists of a mixture	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the pocketbook mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.

COLE – PLEASANT PRAIRIE SOLAR 345 KV GENERATION TIE LINE PROJECT ECOLOGICAL SURVEY REPORT

Results
July 30, 2024

Common Name/ Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
			of gravel and coarse sand mixed with some silt or mud (NatureServe 2024).		USFWS – No comments received.	
Long Solid/ <i>Fusconaia maculata maculata</i>	E	N/A	This mussel is found in the gravel substrates of shoals and riffles of large rivers, as well as impounded areas (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the long solid mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Washboard/ <i>Megaloniaias nervosa</i>	E	N/A	This species is typically a large river species, living in the main channel and in some of the overbank areas of reservoirs, but in some instances, it may also become established in medium-sized and even small rivers. It is found in areas with a slow current with muddy to coarse gravel substrates (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the washboard mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Ohio Pigtoe/ <i>Pleurobema cordatum</i>	E	N/A	This mussel prefers strong currents of large rivers with substrates of sand and gravel, though is somewhat tolerant of lentic systems (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the Ohio pigtoe mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Pondhorn/ <i>Unio merus tetralasmus</i>	T	N/A	This species typically inhabits the quiet or slow-moving, shallow waters of sloughs, borrow pits, ponds, ditches, and meandering streams. It is tolerant to poor water conditions and can be found well buried in a substrate of fine silt and/or mud (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the pondhorn mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Salamander Mussel/ <i>Simpsoniaias ambigua</i>	T	N/A	Preferred habitat is in sand or silt under large, flat stones in areas of a swift current in medium to large rivers and lakes (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the salamander mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Fishes						
Goldeye/ <i>Hiodon alosoides</i>	E	N/A	Habitat includes quiet turbid water of medium to large lowland rivers, small lakes, ponds, fringe wetlands and muddy shallows of larger lakes. Occurs in shallow firm-bottomed sites in river pools or backwaters or over gravel shoals in tributary streams (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the goldeye. The ODNR 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Shortnose Gar/ <i>Lepisosteus platostomus</i>	E	N/A	Habitat includes large weedy lakes and reservoirs, backwaters and quiet pools of medium to large rivers, stagnant ponds, sloughs, canals, brackish waters of coastal inlets, occasionally coastal marine waters, often near vegetation or close to submerged or overhanging objects by day. Young tend to occupy shallows, larger individuals in deeper water. Spawning occurs over weed beds of shallow waters in rivers, usually in	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the shortnose gar. The ODNR 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 this species.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.

COLE – PLEASANT PRAIRIE SOLAR 345 KV GENERATION TIE LINE PROJECT ECOLOGICAL SURVEY REPORT

Results
July 30, 2024

Common Name/ Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
			grass and weeds in shoal water in lakes; or near stone piles of railroad bridges, in nests of smallmouth bass, or over gravel bars (NatureServe 2024).		USFWS – No comments received.	
Iowa Darter/ <i>Etheostoma exile</i>	E	N/A	Habitat includes clear sluggish vegetated headwaters, creeks, and small to medium rivers; weedy portions of glacial lakes, marshes, and ponds; over substrates of sand, peat, and/or organic debris. This darter occurs in deeper lake waters and in stream pools when not breeding (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the Iowa darter. The ODNR 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Spotted Darter/ <i>Etheostoma maculatum</i>	E	N/A	Habitat includes large rubble and boulder areas, adjacent to or in swift deep riffles, in small to medium, clear rivers. Adults apparently spend the winter in areas somewhat deeper and with slower current (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the spotted darter. The ODNR 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Northern Brook Lamprey/ <i>Ichthyomyzon fossor</i>	E	N/A	Adult lampreys are found in clear brooks with fast flowing water and sand or gravel bottoms. Juveniles are found in slow moving water buried in soft substrate in medium to large streams (ODNR 2020).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the northern brook lamprey. The ODNR 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Tonguetied Minnow/ <i>Exoglossum laurae</i>	E	N/A	Habitat includes rocky pools and runs of cool to warm, usually clear, creeks and small to medium rivers of moderate gradient, generally with relatively unsilted bottoms of gravel, rubble, and boulder, often at deeper exits of pools near vegetation or other cover (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the tonguetied minnow. The ODNR 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Popeye Shiner/ <i>Notropis ariommus</i>	E	N/A	Habitat includes warm, relatively clear flowing waters of large creeks and small to medium rivers; these shiners are closely associated with gravel substrate; typically, they occur in runs, backwaters near appreciable current, and the head of pools (NatureServe 2024).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the popeye shiner. The ODNR 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Lake Chubsucker/ <i>Erimyzon sucetta</i>	T	N/A	Habitat includes ponds, lakes, oxbows, sloughs, swamps, impoundments, quiet pools of creeks and small rivers, and similar waters of little or no flow that are clear and have bottoms of sand or silt mixed with organic debris; aquatic vegetation is usually present (NatureServe 2024)	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the lake chubsucker. The ODNR 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.
Paddlefish/ <i>Polyodon spathula</i>	T	N/A	Habitat includes slow-flowing water of large and medium-sized rivers, river-margin lakes, channels, oxbows, backwaters, impoundments with access to spawning areas. This fish prefers depths greater than 1.5 m; it seeks deeper water in late fall and winter. Individuals may congregate near human-made	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the paddlefish. 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	No suitable habitat was observed within the Project area and no in-water work is proposed to occur in perennial streams by Kiewit and/or AEP. Therefore, no impacts to this species are anticipated.

COLE – PLEASANT PRAIRIE SOLAR 345 KV GENERATION TIE LINE PROJECT ECOLOGICAL SURVEY REPORT

Results
July 30, 2024

Common Name/ Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
			structures that create eddies and reduce current velocity (NatureServe 2024).		work is proposed in a perennial stream, this Project is not likely to impact this species. USFWS – No comments received.	
¹ E=Endangered; T=Threatened; PE=Proposed Endangered; N/A=Not Applicable ² According to ODNR, State Listed Wildlife and Plant Species by County (ODNR 2024a). ³ According to the USFWS Information for Planning and Consultation website (USFWS 2024a).						

4.0 CONCLUSIONS AND RECOMMENDATIONS

Stantec conducted a wetland and waterbody delineation and a preliminary habitat assessment for threatened and endangered species within the Project area on June 6, 2024. No wetlands or streams were identified within the Project area. One open water feature (Open Water 1) totaling approximately 0.86 acres was identified within the Project area. Four wetland determination sample point locations were evaluated at locations most likely to be a wetland within the Project area. The locations sampled did not meet the required criteria of a wetland. The completed wetland determination data forms are provided in Appendix D and representative photographs are provided in Appendix C.

The information provided by Stantec regarding wetland, stream, and open water boundaries is based on an analysis of the wetland and upland conditions present within the Project area at the time of the field work. The delineations were performed by experienced and qualified professionals using regulatory agency-accepted practices and sound professional judgment.

An ODNR Ohio Natural Heritage Program data request and environmental review request letter was sent to the ODNR Office of Real Estate on June 6, 2024. The ODNR Office of Real Estate response letter dated July 5, 2024 (Appendix B) states that the Natural Heritage Database has no records of any endangered species within one mile of the Project area.

According to the ODNR, the entire state of Ohio is within the range of the Indiana bat, northern long-eared bat, little brown bat, and tricolored bat. Additionally, the ODNR stated that the Project area is located within the vicinity of records for the Indiana bat and northern long-eared bat. Because the presence of the federally endangered Indiana bat and northern long-eared bat has been established in the area, summer tree clearing is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with the ODNR. The ODNR recommended that tree clearing activities required for the Project only occur between October 1 and March 31.

The ODNR also recommended that a desktop habitat assessment be conducted, followed by a field assessment if needed, to determine if there are potential bat hibernacula present within 0.25 miles of the Project area. Stantec completed a desktop habitat assessment in accordance with the 2024 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2024b) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2024c) and locations of known or suspected karst geology (ODNR 2024b). As part of the desktop assessment, Stantec identified that the entirety of the Project area is located within a mapped area of karst geology (Figure 4, Appendix A). However, no abandoned or active underground mines, underground openings, caves, or any other potentially suitable bat hibernacula were observed within the Project area during the field surveys completed by Stantec. Therefore, no impacts to potential bat hibernacula are anticipated.

COLE – PLEASANT PRAIRIE SOLAR 345 KV GENERATION TIE LINE PROJECT ECOLOGICAL SURVEY REPORT

Conclusions and Recommendations
July 30, 2024

Potentially suitable summer foraging and roosting habitat (old field habitat with scattered trees) for the Indiana bat, northern long-eared bat, tricolored bat, and little brown bat was observed within the Project area. It is anticipated that Kiewit and/or AEP will conduct any required tree clearing activities between October 1 and March 31 in order to avoid impacts to these species. If any summer tree clearing is required, Kiewit and/or AEP will coordinate with the ODNR and proceed with agency recommendations to avoid impacts to these bat species.

According to the ODNR response letter, the Project is within the range of the federally listed and state-listed endangered clubshell, rayed bean, northern riffleshell, snuffbox, and purple cat's paw, the federally listed threatened and state-listed endangered rabbitsfoot, the state-listed endangered elephant-ear, pocketbook, long solid, washboard, and Ohio pigtoe, and the state-listed threatened pondhorn and salamander mussel. However, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact these species.

This Project is also within the range of the state-listed endangered goldeye, shortnose gar, Iowa darter, spotted darter, northern brook lamprey, tonguetied minnow, and popeye shiner and the state-listed threatened lake chubsucker and paddlefish. However, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact these species.

A technical assistance request letter was also submitted to the USFWS on June 6, 2024. The USFWS response letter dated June 20, 2024, that due to the Project type, size, and location they do not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat.

References
July 30, 2024

5.0 REFERENCES

- Brack, Virgil Jr., Dale W. Sparks, John O. Whitaker Jr., Brianne L. Walters, and Angela Boyer. 2010. Bats of Ohio. Indiana State University Center for North American Bat Research and Conservation.
- Harvey, Michael J., J. Scott Altenbach, and Troy L. Best. 1999. Bats of the United States. Arkansas Game & Fish Commission, Little Rock, Arkansas. 64 pp.
- Mack, J.J. 2001. Ohio Rapid Assessment Method for Wetlands, Manual for Using Version 5.0. Ohio EPA Technical Bulletin Wetland/2001-1-1. Ohio Environmental Protection Agency, Division of Surface Water, 401 Wetland Ecology Unit, Columbus, Ohio.
- NatureServe. 2024. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, VA. U.S.A. Available at <http://explorer.natureserve.org>. Accessed July 2024.
- Ohio Department of Natural Resources (ODNR) Division of Wildlife. 2024a. State Listed Wildlife and Plant Species by County. Available at <https://ohiodnr.gov/discover-and-learn/safety-conservation/about-odnr/wildlife/documents-publications/wildlife-plants-county>. Accessed July 2024.
- ODNR, Division of Geological Survey. 2024b. Karst Interactive Map. Available online at Karst Interactive Map Viewer (ohiodnr.gov). Accessed July 2024.
- ODNR, Division of Mineral Resources and Division of Geological Survey. 2024c. Mines of Ohio. Available online at ODNR Mines of Ohio Viewer (ohiodnr.gov). Accessed July 2024.
- ODNR Division of Wildlife. 2020. Species Guide Index. Available at <http://wildlife.ohiodnr.gov/species-and-habitats/species-guide-index/>. Accessed January 2020.
- Ohio Environmental Protection Agency (OEPA). 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI).
- OEPA. 2020. Field Methods for Evaluating Primary Headwater Streams in Ohio. Version 4.1. Ohio EPA Division of Surface Water, Columbus, Ohio. 130 pp.
- Parmalee, P. W. and A. E. Bogan. 1998. The Freshwater Mussels of Tennessee. University of Tennessee Press: Knoxville, Tennessee. 328 pp.
- Sparks, Dale W., Curtis J. Schmidt, and Jerry R. Choate. 2011. Bats of Kansas. Indiana State University Center for North American Bat Research and Conservation, Terre Haute, Indiana. 60 pp.

COLE – PLEASANT PRAIRIE SOLAR 345 KV GENERATION TIE LINE PROJECT ECOLOGICAL SURVEY REPORT

References
July 30, 2024

- U.S. Army Corps of Engineers (USACE), Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y 87 1, U.S. Army Engineer Waterway Experiment Station, Vicksburg, Mississippi.
- USACE. 2002. Issuance of Nationwide Permits; Notice, 67 Fed. Reg. 10. January 15, 2002. Federal Register: The Daily Journal of the United States. Available at <https://www.gpo.gov/fdsys/pkg/FR-2002-01-15/pdf/02-539.pdf>.
- USACE. 2005. Guidance on Ordinary High Water Mark Identification (Regulatory Guidance Letter, No. 05-05). Available online at <https://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-05.pdf>. Accessed January 2024.
- USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Fish and Wildlife Service (USFWS). 2007. Indiana bat (*Myotis sodalis*) draft recovery plan: First revision. U.S. Fish and Wildlife Service, Ft. Snelling, Minnesota. 258 pp.
- USFWS. 2022. Northern Long-eared Bat (*Myotis septentrionalis*). Available online at <https://www.fws.gov/midwest/Endangered/mammals/nleb/nlebFactSheet.html>. Accessed January 2024.
- USFWS. 2024a. Information for Planning and Consultation website. Available at <https://ipac.ecosphere.fws.gov/>. Accessed July 2024.
- USFWS. 2024b. 2024 Range-wide Indiana Bat & Northern Long-eared Bat Survey Guidelines, April 2024. Available at <https://ipac.ecosphere.fws.gov/guideline/survey/population/1/office/31440.pdf>. Accessed July 2024.

Figures
July 30, 2024

Appendix A FIGURES

A.1 FIGURE 1 – PROJECT LOCATION MAP

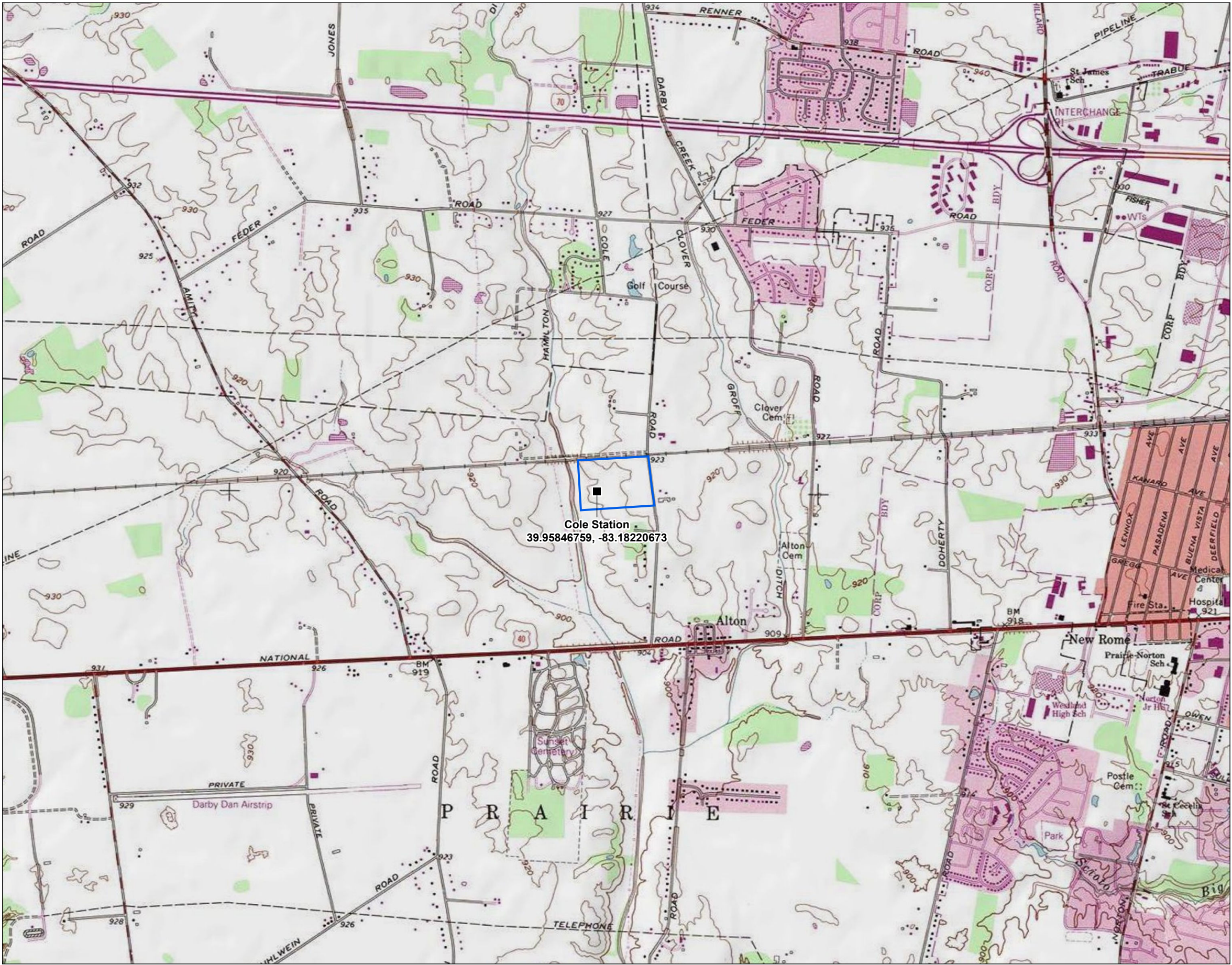
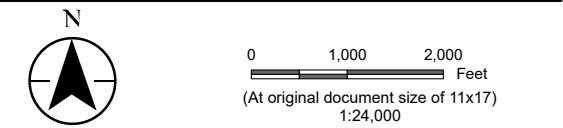


Figure No. 1
Title
Project Location Map

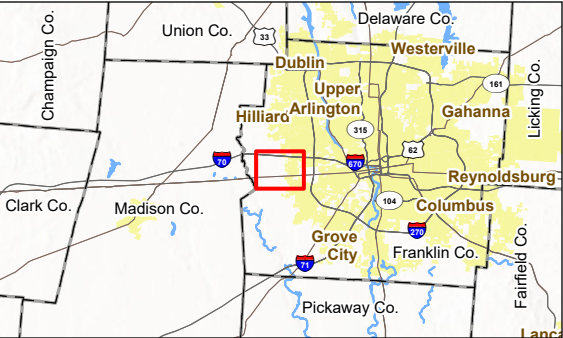
Client/Project
Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project

Project Location
Franklin Co., Ohio

Prepared by MEK on 2024-07-29
TR by JD on 2024-07-29
IR by DG on 2024-07-29



- Legend
- AEP Substation
 - ▭ Project Area



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, Kiewit Power Corporation, Esri, USCB, USGS
3. Background: USGS 7.5' Topographic Quadrangles: Galloway (1966)



U:\23900\239000882\03_data\gis_cad\gis\ArcPre\239000882_Cole_Station.aprx Revised: 2024-07-30 By: mkrzewski

Figures
July 30, 2024

A.2 FIGURE 2 – WETLAND AND WATERBODY DELINEATION MAP

U:\23900\239000882\03_data\gis_cad\gis\ArcPre\239000882_Cole_Station.aprx Revised: 2024-07-30 By: mkraczewski

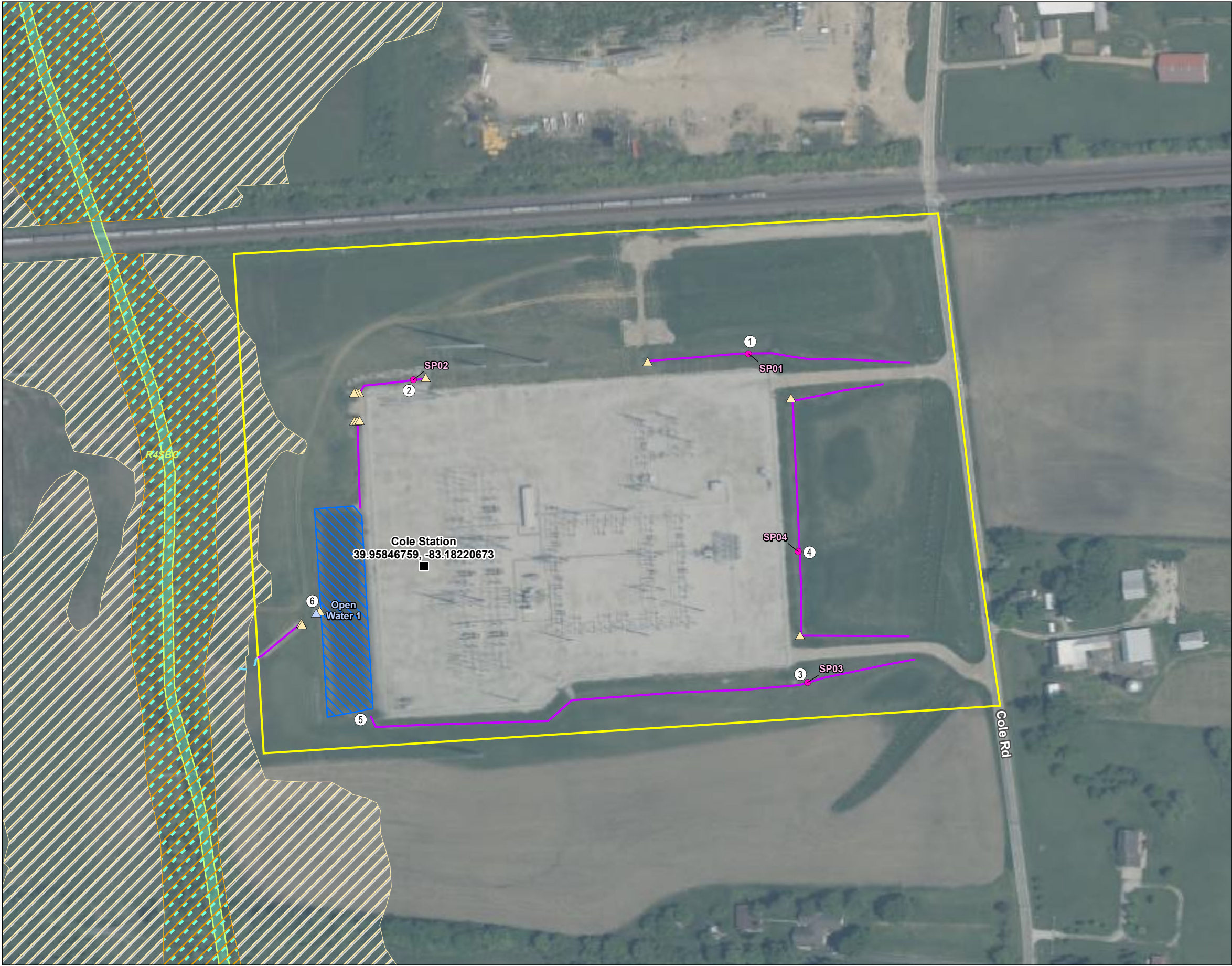


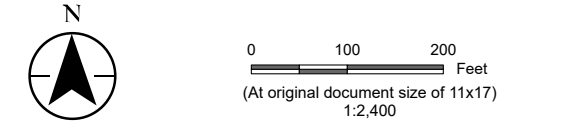
Figure No.
2
Title
Wetland and Waterbody Delineation Map

Client/Project
Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project

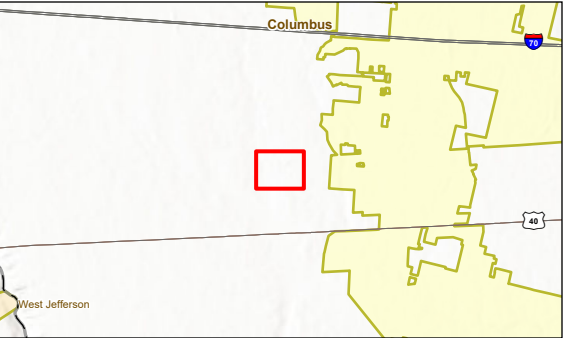
239000882

Project Location
Franklin Co., Ohio

Prepared by MEK on 2024-07-29
TR by MK on 2024-07-29
IR by AJK on 2024-07-29



- Legend
- AEP Substation
 - Project Area
 - △ Existing Culvert
 - Photo Location
 - △ Existing Storm Drain
 - Wetland Determination Sample Point
 - - - Approximate Upland Drainage Feature
 - ~ Field Delineated Upland Drainage Feature
 - - - Approximate Waterway
 - ▨ Field Delineated Open Water
 - National Wetlands Inventory Feature
 - FEMA Flood Hazard Area
 - ▨ 100-year Floodplain
 - ▨ Floodway



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, Kiewit Power Corporation, Esri, USCB, USGS, USFWS, FEMA
3. Background: 2021 NAIP



Figures
July 30, 2024

A.3 FIGURE 3 – HABITAT ASSESSMENT MAP

U:\23900\239000882\03_data\gis_cad\gis\ArcPre\239000882_Cole_Station.aprx Revised: 2024-07-30 By: mkraczewski

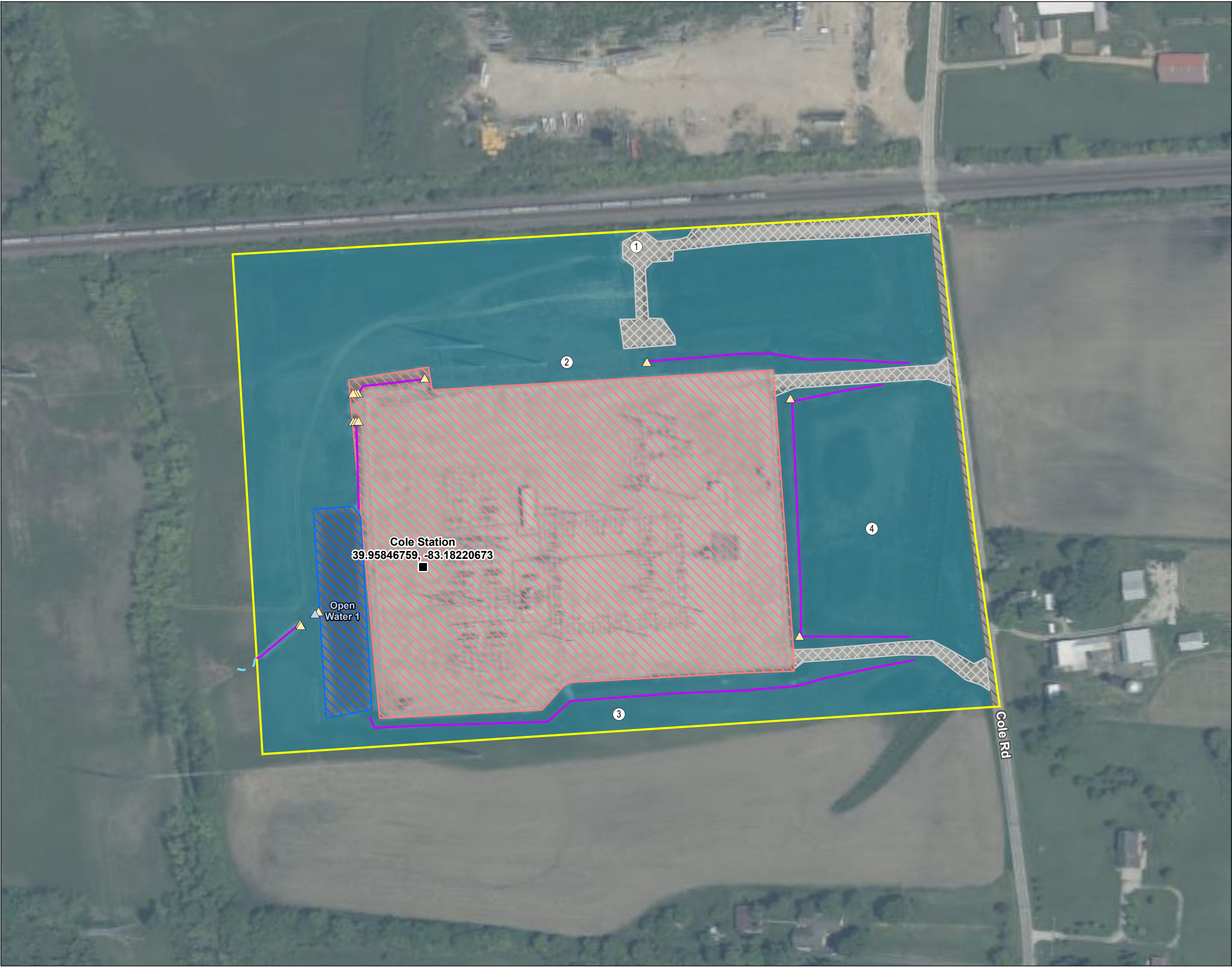


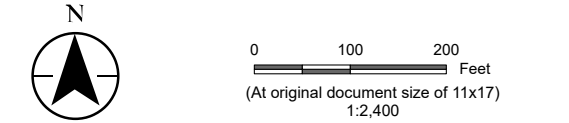
Figure No.
3
Title
Habitat Assessment Map

Client/Project
Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project

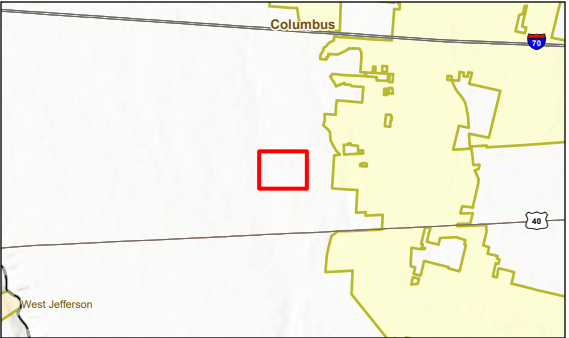
239000882

Project Location
Franklin Co., Ohio

Prepared by MEK on 2024-07-29
TR by MK on 2024-07-29
IR by AJK on 2024-07-29



- Legend
- AEP Substation
 - Project Area
 - △ Existing Culvert
 - Photo Location
 - △ Existing Storm Drain
 - Approximate Upland Drainage Feature
 - Field Delineated Upland Drainage Feature
 - Approximate Waterway
 - Field Delineated Open Water
 - Habitat Area
 - Old Field
 - Existing Gravel Road
 - Existing Paved Road
 - Industrial Land



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, Kiewit Power Corporation, Esri, USCB, USGS
3. Background: 2021 NAIP



Figures
July 30, 2024

A.4 FIGURE 4 – BAT HIBERNACULA DESKTOP STUDY MAP

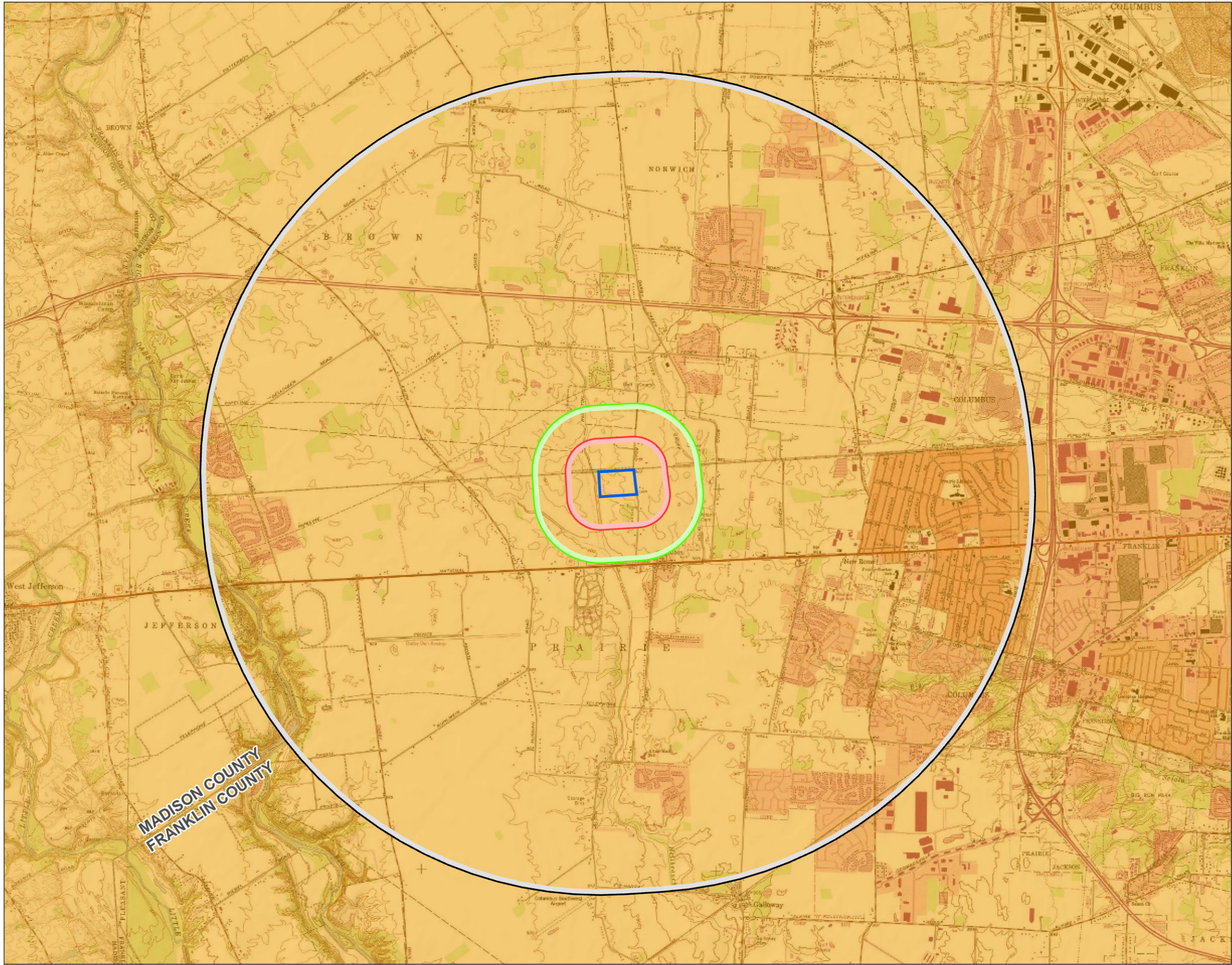


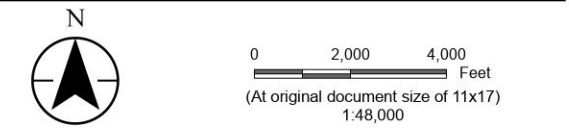
Figure No.
4

Title
Bat Hibernacula Desktop Study Map

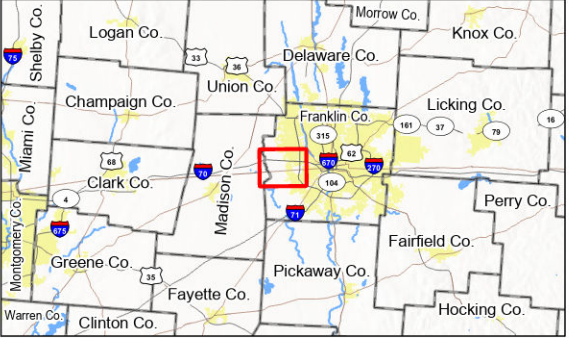
Client/Project
Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project

Project Location
Franklin Co., Ohio

Prepared by MEK on 2024-06-12
TR by MK on 2024-06-13
IR by AJK on 2024-07-18



- Legend
- Project Area
 - 0.25-Mile Project Area Buffer
 - 0.5-Mile Project Area Buffer
 - 3-Mile Project Area Buffer
 - Karst Feature*
 - Area of Karst Geology
 - Mine Opening*
 - Underground Mine*



Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
- Data Sources: Stantec, Kiewit Power Corporation, Esri, USCB, USGS
- Background: USGS 7.5' Topographic Quadrangles: Galloway (1966)



Agency Correspondence
July 30, 2024

Appendix B AGENCY CORRESPONDENCE



Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate

Tara Paciorek, Chief

2045 Morse Road – Bldg. E-2

Columbus, Ohio 43229

Phone: (614) 265-6661

Fax: (614) 267-4764

July 5, 2024

Daniel Godec
Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati, Ohio 45241

Re: 24-0856_Cole-Pleasant Prairie Solar 345 kV Generation Tie Line

Project: The proposed project involves the construction of a new segment of 345 kV transmission line just outside of the existing Cole Road Station to provide a 345 kV interconnection to a new solar substation, Darby Creek, owned by Invenergy.

Location: The proposed project is located in Prairie Township, Franklin County, Ohio.

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

Natural Heritage Database: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. Records searched date from 1980.

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.

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 project is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute

presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, 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 endangered 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 bat species 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. The DOW recommends tree 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 \geq 20 if possible.

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 & NORTHERN LONG-EARED 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 Eileen Wyza 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 following listed mussel species.

Federally Endangered

clubshell (*Pleurobema clava*)
rayed bean (*Villosa fabalis*)
northern riffleshell (*Epioblasma torulosa rangiana*)
snuffbox (*Epioblasma triquetra*)
purple cat’s paw (*Epioblasma o. obliquata*)

Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered

elephant-ear (*Elliptio crassidens crassidens*)
pocketbook (*Lampsilis ovata*)
long solid (*Fusconaia maculata maculate*)
washboard (*Megalonaias nervosa*)
Ohio pigtoe (*Pleurobema cordatum*)

State Threatened

pondhorn (*Unio merus tetralasmus*)
Salamander Mussel (*Simpsonaias ambigua*)

Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The project is within the range of the following listed fish species.

State Endangered

goldeye (*Hiodon alosoides*)
shortnose gar (*Lepisosteus platostomus*)
Iowa darter (*Etheostoma exile*)
spotted darter (*Etheostoma maculatum*)
northern brook lamprey (*Ichthyomyzon fossor*)
tonguetied minnow (*Exoglossum laurae*)
popeye shiner (*Notropis ariommus*)

State Threatened

lake chubsucker (*Erimyzon sucetta*)
paddlefish (*Polyodon spathula*)

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.

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.

Thank you for affording us the opportunity to comment.

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.

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

United States Department of the Interior



FISH AND WILDLIFE SERVICE

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



June 20, 2024

Project Code: 2024-0092868

Dear Daniel Godec:

The U.S. Fish and Wildlife Service (Service) 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 effects 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: Due to the project, type, size, and location, we do not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat. If there are any project modifications during the term of this action, or additional information for listed or proposed species or their critical habitat becomes available, or if new information reveals effects of the action that were not previously considered, then please contact us for additional project review.

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,

Erin Knoll
Field Office Supervisor

Representative Photographs
July 30, 2024

Appendix C REPRESENTATIVE PHOTOGRAPHS

C.1 WETLAND AND WATERBODY PHOTOGRAPHS

Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project
Franklin County, Ohio



Photograph Location 1. View of upland (old field habitat) at wetland determination sample point location SP01 within an existing upland drainage feature. Photograph taken facing west.



Photograph Location 1. View of soil profile at wetland determination sample point location SP01.

Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project
Franklin County, Ohio



Photograph Location 2. View of upland (old field habitat) at wetland determination sample point location SP02 located within an existing upland drainage feature. Photograph taken facing north.



Photograph Location 2. View of soil profile at wetland determination sample point location SP02.

Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project
Franklin County, Ohio



Photograph Location 3. View of upland (old field habitat) at wetland determination sample point location SP03 located within an existing upland drainage feature. Photograph taken facing east.



Photograph Location 3. View of soil profile at wetland determination sample point location SP03.

Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project
Franklin County, Ohio



Photograph Location 4. View of upland (old field habitat) at wetland determination sample point location SP04 located within an existing upland drainage feature. Photograph taken facing north.



Photograph Location 4. View of soil profile at wetland determination sample point location SP04.

Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project
Franklin County, Ohio



Photograph Location 5. View of Open Water 1. Photograph taken facing east



Photograph Location 6. Representative view of existing culverts within the Project area. Photograph taken facing south.

Representative Photographs
July 30, 2024

C.2 HABITAT PHOTOGRAPHS

Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project
Franklin County, Ohio



Photograph Location 1. View of old field habitat and existing gravel road within the Project area. Photograph taken facing east.



Photograph Location 2. View of old field habitat and industrial land (existing Cole Station) within the Project area. Photograph taken facing northwest.

Kiewit Power Constructors Co.
Cole-Pleasant Prairie Solar 345 kV Generation Tie Line Project
Franklin County, Ohio



Photograph Location 3. View of old field habitat and industrial land (existing Cole Station) within the Project area. Photograph taken facing west.



Photograph Location 4. View of old field habitat within the Project area. Photograph taken facing west.

Data Forms
July 30, 2024

Appendix D DATA FORMS

D.1 WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Cole-Pleasant Prairie 345 kV Generation Tie Line Project City/County: Franklin County Sampling Date: 06/06/2024
 Applicant/Owner: Kiewit Power Corporation Co. State: OH Sampling Point: SP01
 Investigator(s): A Kwolek, M Kearns Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1
 Subregion (LRR or MLRA): LRR M, MLRA Lat: 39.959647 Long: -83.179922 Datum: WGS84
 Soil Map Unit Name: Celina silt loam, 2 to 6 percent slopes NWI classification: NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. <u>Salix nigra</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: - <u>1</u> - Rapid Test for Hydrophytic Vegetation X <u>2</u> - Dominance Test is >50% - <u>3</u> - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) <small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small>
<u>25</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Typha angustifolia</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Salix nigra</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Solidago canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Populus deltoides</u>	<u>2</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>37</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

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

SOIL

Sampling Point: SP01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/2	100					Loam	Intermixed with fill
5-7	10YR 5/3	100					Sandy Clay	Intermixed with fill
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ³ :					
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (F21)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Dark Surface (S7)			<input type="checkbox"/> Very Shallow Dark Surface (F22)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Redox Depressions (F8)					
Restrictive Layer (if observed):								
Type: _____								
Depth (inches): _____						Hydric Soil Present? Yes ____ No <input checked="" type="checkbox"/>		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:						Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)								
<input checked="" type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Surface Soil Cracks (B6)				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Drainage Patterns (B10)				
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> True Aquatic Plants (B14)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Water Marks (B1)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Sediment Deposits (B2)		<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Stunted or Stressed Plants (D1)				
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input checked="" type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Gauge or Well Data (D9)						
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Other (Explain in Remarks)						
Field Observations:								
Surface Water Present		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): 6				
Water Table Present		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):				
Saturation Present		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): 0				
(includes capillary fringe)						Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Cole-Pleasant Prairie 345 kV Generation Tie Line Project City/County: Franklin County Sampling Date: 06/06/2024
 Applicant/Owner: Kiewit Power Corporation Co. State: OH Sampling Point: SP02
 Investigator(s): Aaron Kwolek, Michelle Kearns Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1
 Subregion (LRR or MLRA): LRR M, MLRA Lat: 39.959492 Long: -83.182294 Datum: WGS84
 Soil Map Unit Name: Kokomo silty clay loam, 0 to 2 percent slopes NWI classification: NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
		<u>0</u> = Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
		<u>0</u> = Total Cover		
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Typha angustifolia</u>	<u>100</u>	<u>Yes</u>	<u>OBL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
		<u>100</u> = Total Cover		
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
		<u>0</u> = Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)				

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
_____ 4 - Morphological Adaptations¹
 (Provide supporting data in Remarks or on a separate sheet)
_____ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

SOIL

Sampling Point: SP02

[illegible]

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Cole-Pleasant Prairie 345 kV Generation Tie Line Project City/County: Franklin County Sampling Date: 06/06/2024
 Applicant/Owner: Kiewit Power Corporation Co. State: OH Sampling Point: SP03
 Investigator(s): A. Kwolek, M. Kearns Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Dip Local relief (concave, convex, none): Concave Slope %: 2
 Subregion (LRR or MLRA): LRR M, MLRA Lat: 39.957858 Long: -83.179485 Datum: WGS84
 Soil Map Unit Name: Celina silt loam, 2 to 6 percent slopes NWI classification: NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: - <u>1</u> - Rapid Test for Hydrophytic Vegetation X <u>2</u> - Dominance Test is >50% - <u>3</u> - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) <small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small>
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Equisetum arvense</u>	50	Yes	FAC	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. <u>Scirpus atrovirens</u>	50	Yes	OBL	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100</u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

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

SOIL

Sampling Point: SP03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix			Redox Features						
	Color (moist)		%	Color (moist)		%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR	4/2	100						Silt Loam	Intermixed with fill
6-12	10YR	5/3	95	10YR	4/6	5	D	M	Silty Clay Loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.										
Hydric Soil Indicators:								Indicators for Problematic Hydric Soils ³ :		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A16)				
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Iron-Manganese Masses (F12)				
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (F21)				
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Dark Surface (S7)			<input type="checkbox"/> Very Shallow Dark Surface (F22)				
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> 2 cm Muck (A10)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)							
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)							
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Redox Depressions (F8)							
Restrictive Layer (if observed):										
Type: _____										
Depth (inches): _____								Hydric Soil Present? Yes ____ No <input checked="" type="checkbox"/>		
Remarks:										
HYDROLOGY										
Wetland Hydrology Indicators:								Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)										
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Surface Soil Cracks (B6)				
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Aquatic Fauna (B13)			<input type="checkbox"/> Drainage Patterns (B10)				
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Stunted or Stressed Plants (D1)				
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Gauge or Well Data (D9)							
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/> Other (Explain in Remarks)							
Field Observations:										
Surface Water Present		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):		2				
Water Table Present		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):						
Saturation Present (includes capillary fringe)		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches):		0				
Wetland Hydrology Present?								Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks:										

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Cole-Pleasant Prairie 345 kV Generation Tie Line Project City/County: Franklin County Sampling Date: 06/06/2024
 Applicant/Owner: Kiewit Power Corporation Co. State: OH Sampling Point: SP04
 Investigator(s): A. Kwolek, M. Kearns Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 2
 Subregion (LRR or MLRA): LRR M, MLRA Lat: 39.958571 Long: -83.179559 Datum: WGS84
 Soil Map Unit Name: Crosby silt loam, Southern Ohio Till Plain, 2 to 6 percent slopes NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: - 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% - 3 - Prevalence Index is ≤3.0 ¹ - 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) - Problematic Hydrophytic Vegetation ¹ (Explain) <small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small>
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Juncus tenuis</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Festuca rubra</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Scirpus cyperinus</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>	
4. <u>Typha angustifolia</u>	<u>10</u>	<u>No</u>	<u>OBL</u>	
5. <u>Schoenoplectus tabernaemontani</u>	<u>10</u>	<u>No</u>	<u>OBL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: SP04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	100					Clay Loam	Intermixed with fill
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (F21)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Dark Surface (S7)			<input type="checkbox"/> Very Shallow Dark Surface (F22)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			<input type="checkbox"/> Redox Depressions (F8)					
Restrictive Layer (if observed):								
Type: <u>Fill</u>								
Depth (inches): <u>3</u>						Hydric Soil Present? Yes <u> </u> No <u>X</u>		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:						Secondary Indicators (minimum of two required)		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>								
<input checked="" type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Surface Soil Cracks (B6)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Aquatic Fauna (B13)			<input type="checkbox"/> Drainage Patterns (B10)		
<input checked="" type="checkbox"/> Saturation (A3)			<input type="checkbox"/> True Aquatic Plants (B14)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Thin Muck Surface (C7)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Gauge or Well Data (D9)					
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/> Other (Explain in Remarks)					
Field Observations:								
Surface Water Present		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <u>2</u>				
Water Table Present		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u> </u>				
Saturation Present (includes capillary fringe)		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth (inches): <u>0</u>				
Wetland Hydrology Present?						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								