Letter of Notification for the Waverly-Lick 138 kV Transmission Line Relocation Project



PUCO Case No. 23-1044-EL-BLN

Submitted to:

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

Submitted by: Ohio Power Company

December 12, 2023

Letter of Notification

Ohio Power Company Waverly-Lick 138 kV Transmission Line Relocation Project

4906-6-05

Ohio Power Company (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 Letter of Notification.

The Company proposes the Waverly - Lick 138 kV Transmission Line Relocation Project (the "Project") in the Seal Township, Pike County, Ohio. The purpose of the Project is to relocate approximately 0.5 mile of 138 kV transmission line, and replace the existing single circuit, wood monopoles with single circuit, steel monopoles. The Project will require new and supplemental right-of-way ("ROW) to relocate a portion of the existing transmission line. The location of the Project is shown in Appendix A, Figures 1 and 2.

The Project meets the requirements for a LON because it is within the types of projects defined by items (1)(b) and of Ohio Administrative Code Section 4906-1-01 Appendix A of the Application Requirement Matrix For Electric Power Transmission Lines:

- (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:
 - (b) Line(s) greater than 0.2 miles in length but not greater than two miles in length.

The Project has been assigned PUCO Case No. 23-1044-EL-BLN.

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.

A customer is developing a property crossed by the existing Waverly - Lick 138 kV transmission line, where the transmission line conflicts with their development plans. As such, the customer requested that the Company relocate approximately 0.5 mile of the existing 138 kV line to allow for their proposed expansion plans. The Company has agreed to relocate the facilities at the customer's expense. Removing the Waverly-

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Lick 138 kV transmission line is not a viable alternative as the line provides looped service to a customer and removal would eliminate the reliability of service.

Failure to move forward with the Project would limit the customer's ability to expand their operation.

The Project will not be submitted through the PJM M-3 process since it will not impact the existing grid topology. In addition, the cost will be borne by the customer. The Project was not listed in the Company's 2023 Long-Term Forecast Report because the Project was unknown 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 location of the Project in relation to existing transmission facilities is shown in Figure 1 of Appendix A.

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 was requested by a customer to allow expansion of an existing landfill. The existing Waverly-Lick 138 kV transmission line bisects a portion of the customer's property. Conceptual alternatives were identified north and further to the south of the landfill expansion area. However, the proposed route was selected because it minimizes impacts to additional property owners and improves the location of the alignment on existing properties by locating it along property boundaries and paralleling the road. The relocation also considers future use of the customer's property by shifting the alignment between an abandoned railroad spur and State Route 220, which is unusable space for the landfill. Other route alternatives considered would require additional right-of-way (ROW) on additional property owners, not currently impacted by the existing transmission line. Further, the proposed route avoids impacts to wetlands, streams, and cultural resources. The Project, as proposed, is the most appropriate solution for meeting the Company's and customer'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 will inform affected property owners and tenants about this Project through several different mediums. Within seven days of filing this LON, the Company will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements of Ohio Revised Code

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("OAC") Section 4906-6-08(A)(1-6). Further, the Company will mail a letter, via first class mail, to affected landowners, tenants, contiguous owners and any other landowner the Company may approach for an easement necessary for the construction, operation, or maintenance of the Project. The letter will comply with all requirements of OAC Section 4906-6-08(B). The Company maintains a website (http://aeptransmission.com/ohio/) which provides the public access to an electronic copy of this LON and the public notice for this LON. An electronic copy of the LON will be served to the public library in each political subdivision for this Project. The Company retains ROW land agents that discuss Project timelines, construction and restoration activities and convey information to affected owners and tenants throughout the Project.

B(6) Construction Schedule

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

Construction of the Project is planned to begin in March 2024, and the anticipated in-service date will be October 2024.

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 the proposed Project area on a map of 1:24,000-scale (1 inch equals 2,000 feet), showing the Project on the United States Geological Survey (USGS) 7.5-minute topographic map of the Waverly South, Ohio quadrangle. Figure 2 in Appendix A shows the Project Area on recent aerial photography, dated 2020, as provided by ESRI World Imagery at a scale of 1:6,000 scale (1 inch equals 500 feet).

To visit the Project site from Columbus, Ohio, take I-71 South to Exit 101 for I-270 East. Merge onto I-270 East and continue for 1.9 miles to Exit 52 for U.S. 23 South/Corridor C toward Circleville. Continue on U.S. 23 for 39.9 miles. Use the right two lanes to continue onto U.S. 23 toward Waverly/U.S. 50 West. Continue for 14.3 miles on U.S. 23 South/Corridor C. Turn left onto North Market Street. After 0.1 mile, turn right onto West 3rd Street. Continue for 0.1 mile and turn left onto OH 220 East/Bridge Street. After 2.4 miles, turn left to stay on OH 220 East. Continue for 1.4 miles and then turn left onto Miller Lane. The destination will be on the left after 0.4 mile at the approximate address of 345 Millers Lane, Waverly, Ohio 45690 at latitude 39.075283, longitude -82.956560.

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 property required for the Project is provided in the table below.

Property Parcel Number	Agreement Type	Easement/ Option Obtained (Yes/No)
210184000000	Supplemental Easement	No

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: 138 kV

Conductors: (3) 636 KCM ACSR 26/7 Grosbeak (Same conductor type as existing)

Static Wire: 7#8 Alumoweld

Insulators: Polymer ROW Width: 100 feet

Structure Type: (3) Three steel monopole braced post structures

(3) Three steel monopole custom dead end structures

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.

No occupied residences or institutions are located within 100 feet of the Project.

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B(9)(c) Project Cost

The estimated capital cost of the project.

The capital cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately \$1,747,000 using a Class 4 estimate. However, the customer is responsible for all costs associated with the relocation.

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.

Aerial photography of the Project vicinity is provided as Figure 2 in Appendix A. The Project is located in Seal Township, Pike County, Ohio. Land use in the Project area is dominated by the existing landfill with scattered adjacent residences. The closest residence is approximately 160 feet to the south of the existing proposed transmission line.

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.

No agricultural land is located within the Project footprint. The Pike County Auditor reviewed the Project on November 10, 2023. The parcel crossed by the Project was not identified as an Agricultural District Land parcel.

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.

The Company's consultant completed a Phase I Cultural Resource Management Investigation of the Project Area. No further investigation was recommended by the Company's consultant to the Ohio Historic Preservation Office ("SHPO"). The SHPO agreed that the Project will not impact any cultural resources eligible for listing on the NRHP and no additional coordination is necessary prior to construction. A copy of the November 6, 2023, concurrence letter from SHPO is provided in Appendix B.

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.

A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHCDooooo6. The Company will implement and maintain best management practices as outlined in the Project-specific Storm Water Pollution Prevention Plan ("SWPPP") to minimize erosion, control sediment, and to protect surface water quality during storm events.

A wetland and stream delineation was conducted for the Project area, see Appendix C. One intermittent stream was identified and is proposed to be crossed by the Project, however, no impacts to this stream are anticipated. Therefore, the Project will not require a Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers or a Section 401 Water Quality Certification from the OEPA.

The FEMA Flood Insurance Rate Map was reviewed to identify any floodplains/flood hazard areas that have been mapped within the Project Area (specifically, map number **39131C0229C**). Based on this mapping, no mapped FEMA floodplains are located in the Project Area. Therefore, no floodplain permit will be required for this Project.

There are no other known local, state, or federal requirements that must be met prior to commencement of the proposed 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 USFWS Ohio Ecological Services Field Office seeking technical assistance on the Project for potential impacts to threatened or endangered species. The August 31, 2023 response letter from the USFWS (see Appendix B) identified the Indiana bat and northern long-eared bat as occurring within the Project area. In accordance with current Ohio Department of Natural Resources ("ODNR") Division of Wildlife ("DOW") /USFWS Joint Guidance for at Surveys and tree clearing, no known karst, mines and/or caves were identified within 0.25 mile of the project survey area. The USFWS recommends that if no caves or abandoned mines are present and trees ≥3 inches cannot be avoided, trees should be removed between October 1 and March 31 to avoid adverse effects to Indiana bats and northern long-eared bats during the brood-rearing months. If seasonal tree cutting is not possible, the USFWS indicated that presence of these bats has already been confirmed in

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the Project vicinity, so any additional summer surveys would not constitute presence/absence surveys for these species.

A coordination letter was submitted to the Ohio Department of Natural Resources ("ODNR") Division of Wildlife ("DOW") Ohio Natural Heritage Program ("ONHP") and the ODNR - Office of Real Estate in August 2023, seeking an environmental review of the proposed Project for potential impacts on state-listed and federally-listed threatened or endangered species. Correspondence from ODNR's DOW/OHNP and the ODNR - Office of Real Estate was received on October 2, 2023 (see Appendix B).

According to the ODNR-DOW, the Project is within the range of the Indiana bat, northern long-eared bat, little brown bat, and tricolored bat, with records of the northern long-eared bat in the Project vicinity. The ODNR recommends cutting between October 1 and March 31, if necessary. No winter hibernacula were observed within the Project Area and no potential hibernaculum were identified within 0.25 mile of the Project Area based on review of karst and mining GIS data as well as topographic quadrangle maps and aerial photography. Approximately one acre of tree clearing is expected to adhere to the seasonal restrictions.

The ODNR-DOW indicated that the Project is within the range of the six federally or state endangered mussel species and ten state endangered or threatened fish species. Due to no in-water work and no perennial streams, these species are not anticipated to be impacted by the Project.

The ODNR-DOW indicated that the Project is within the range of the timber rattlesnake, a state endangered species, the eastern spadefoot toad, a state endangered species, and the midland mud salamander, a state threatened species. Due to the location, the type of habitat within the Project area, and the type of work proposed, ODNR stated that the Project is not likely to impact these species.

The ODNR-DOW also indicated that the Project is within the range of the eastern harvest mouse, a state threatened species. This species relies on early successional habitats dominated by herbaceous vegetation with less than 30% woody material. Further coordination with ODNR was conducted based on the potential presence of this habitat. ODNR stated that suitable habitat could not be ruled out, but project activities would not have an impact on the species. ODNR recommended that suitable habitat be conserved where possible, and the at habitat is not unnecessarily disturbed. A copy of the November 30, 2023 additional coordination is provided in Appendix B.

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.

The ODNR-DOW response indicated that unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, or other protected natural areas were not identified within the Project Area (see Appendix B).

FEMA Flood Insurance Rate Maps were consulted to identify any floodplains/flood hazard areas that have been mapped in the Project Area (specifically, map number **39131C0229C**). Based on these maps, no mapped FEMA floodplains are located in the Project area.

Wetland and stream delineation field surveys were completed within the Project area by the Company's consultant in August 2023. One intermittent stream was identified within the Project area but is not anticipated to be impacted by the Project.

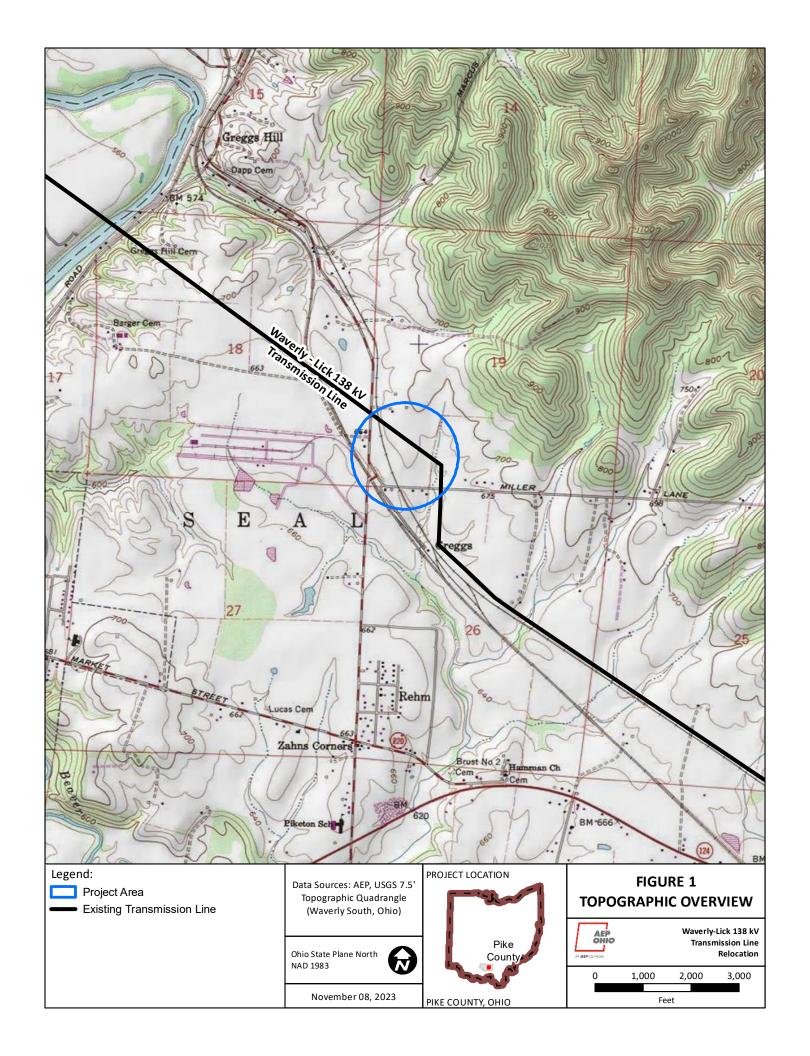
B(10)(g) Unusual Conditions

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 Maps





Appendix B

Agency Coordination



In reply, refer to 2023-PIK-59416

November 6, 2023

Ryan Weller Weller & Associates, Inc. 1395 W. Fifth Ave. Columbus, OH 43212 rweller@wellercrm.com

RE: Waverly-Lick 138kV Relocation Project, Seal Township, Pike County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received October 18, 2023 regarding the proposed Waverly-Lick 138kV Relocation Project, Seal Township, Pike 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 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 letter report titled *Phase I Cultural Resource Management Investigations for the Waverly-Lick 138kV Relocation Project in Seal Township, Pike County, Ohio* by Seth T. Cooper and Scott McIntosh (Weller & Associates, Inc. 2023).

A literature review, visual inspection, and shovel probe excavation was completed as part of the investigations. No previously identified archaeological sites are located within the project area and no new archaeological sites were identified during survey. The project area was found to be highly disturbed. Our office agrees no additional archaeological survey is needed.

A literature review and field survey were conducted as part of the investigations. A total of seven (7) extant resources fifty years of age or older were identified in the Area of Potential Effects (APE). It is Weller's recommendation that none of the resources are eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with Weller's recommendations of eligibility.

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 historic properties are discovered during implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me at (614) 298-2022, or by e-mail at khorrocks@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Krista Horrocks, Project Reviews Manager

Resource Protection and Review

RPR Serial No: 1100269

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



August 31, 2023

Project Code: 2023-0118076

Dear Ms. Olivia Speckman:

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

Federally Threatened and Endangered Species: The endangered Indiana bat (Myotis sodalis) and northern long-eared bat (Myotis septentrionalis) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: The proposed project is in the vicinity of one or more confirmed records of Indiana bats and/or northern long-eared bats. Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.

<u>Federally Proposed Species</u>: On September 14, 2022, the Service proposed to list the tricolored bat (*Perimyotis subflavus*) as endangered under the ESA. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. During spring, summer, and fall, this species roosts primarily among leaf clusters of live or recently dead trees, emerging at dusk to hunt for insects over waterways and forest edges. While white-nose syndrome is by far the most serious threat to the tricolored bat, other threats now have an increased significance due to the dramatic decline in the species' population. These threats include disturbance to bats in roosting, foraging, commuting, and over-wintering habitats. Mortality due to collision with wind turbines, especially during migration, has also been documented across their range. Conservation measures for the Indiana bat and northern longeared bat will also help to conserve the tricolored bat.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

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

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

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,

Jeromy Applegate

Acting Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW Eileen Wyza, ODNR-DOW



MARY MERTZ, DIRECTOR

Fax: (614) 267-4764

Office of Real Estate Tara Paciorek, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229 Phone: (614) 265-6661

October 2, 2023

Olivia Speckman V3 Companies 619 North Pennsylvania Street Indianapolis, Indiana 46204

Re: 23-1009; Waverly-Lick Rebuild

Project: The proposed project involves the relocation of approximately 0.5 miles of transmission line.

Location: The proposed project is located in Seal Township, Pike 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 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 ≥ 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*) Northern riffleshell (*Epioblasma torulosa rangiana*) rayed bean (*Villosa fabalis*)

State Endangered

Ohio pigtoe (*Pleurobema cordatum*) washboard (*Megalonaias nervosa*) yellow sandshell (*Lampsilis teres*)

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

bigeye shiner (Notropis boops)
goldeye (Hiodon alosoides),
popeye shiner (Notropis ariommus),
shoal chub (Macrhybopsis hyostoma),
shortnose gar (Lepisosteus platostomus),
shovelnose sturgeon (Scaphirhynchus platorynchus),

State Threatened

blue sucker (*Cycleptus elongatus*), channel darter (*Percina copelandi*), paddlefish (*Polyodon spathula*) river darter (*Percina shumardi*),

The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the timber rattlesnake (*Crotalus horridus*), a state endangered species, and a federal species of concern. The timber rattlesnake is a woodland species. In addition to using wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the midland mud salamander (*Pseudotriton montanus diastictus*), a state threatened species. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern harvest mouse (*Reithrodontomys humulis*), a state threatened species. This species relies on early successional habitats dominated by herbaceous vegetation with less than 30% woody material. The DOW recommends that early successional habitats be preserved where possible. If early successional habitats won't be impacted, this project is not likely to impact this species.

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

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

The <u>local floodplain administrator</u> 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

Aaron Geckle

From: Nathan.Reardon@dnr.ohio.gov

Sent: Thursday, November 30, 2023 10:12 AM

To: Olivia Speckman

Cc: Shannon T Hemmerly; Jeff Moody

Subject: [EXTERNAL] RE: 23-1009; V3 - Waverly-Lick Rebuild ODNR Comments

Attachments: image002.gif

Hi Olivia,

I don't think we can rule out that suitable habitat may be present. However, I don't think that project activities will have an impact on the species. We only recommend that suitable habitat be conserved where possible, and that habitat is not unnecessarily disturbed.

Thank you, Nathan



Nathan Reardon

Compliance Coordinator ODNR Division of Wildlife 2045 Morse Road Columbus, OH 43229 Phone: 614-265-6741

Email: nathan.reardon@dnr.ohio.gov

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Please consider the environment before printing this email.

From: Olivia Speckman <ospeckman@v3co.com> Sent: Wednesday, November 29, 2023 3:51 PM

To: Reardon, Nathan < Nathan.Reardon@dnr.ohio.gov>

Cc: Shannon T. Hemmerly - AEP (STHEMMERLY@AEP.COM) <STHEMMERLY@AEP.COM>; Jeff Moody

<jmoody@v3co.com>

Subject: FW: 23-1009; V3 - Waverly-Lick Rebuild ODNR Comments

Good Afternoon,

I wanted to follow up on the concurrence request below for the AEP Waverly Lick project. Please let me know if you have any questions or need additional information.

Thanks, Olivia

Olivia D. Speckman | Project Scientist

V3 Companies | C 317.554.7968 | E ospeckman@v3co.com

From: Olivia Speckman

Sent: Friday, November 17, 2023 3:26 PM

To: Nathan.Reardon@dnr.ohio.gov

Cc: Shannon T. Hemmerly - AEP (STHEMMERLY@AEP.COM) <STHEMMERLY@AEP.COM>; Jeff Moody

<imoody@v3co.com>

Subject: FW: 23-1009; V3 - Waverly-Lick Rebuild ODNR Comments

Good Afternoon,

On behalf of AEP, we are reaching out in regard to the Waverly Lick 138kV Rebuild project located in Pike County, Ohio. The attached ODNR comment letter dated October 2, 2023 stated that the project is within range of the state threatened eastern harvest mouse. It was noted that this species relies on early successional habitats dominated by herbaceous vegetation with less than 30% woody material. The project is located in a setting that is highly disturbed by ongoing landfill activities and bordered by active roadways, therefore, the project lacks high quality habitat for the species. Please see the attached KMZ depicting the project area.

Based on this additional project information, we are requesting concurrence from ODNR that habitat is not likely present and impacts to the species are not anticipated. Please let me know if you need anything additional in order to provide a response.

Thank you, Olivia

Olivia D. Speckman | Project Scientist

V3 Companies | C 317.554.7968 | E ospeckman@v3co.com

From: EnvironmentalReviewRequest@dnr.ohio.gov <EnvironmentalReviewRequest@dnr.ohio.gov>

Sent: Monday, October 2, 2023 1:57 PM

To: Olivia Speckman < ospeckman@v3co.com >

Cc: sthemmerly@aep.com; Jeff Moody jmoody@v3co.com> Subject: 23-1009; V3 - Waverly-Lick Rebuild ODNR Comments

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Please see the attached ODNR Environmental Review comment letter for your Environmental Review request.

Any questions regarding the letter should be directed to Mike Pettegrew at mike.pettegrew@dnr.ohio.gov.

Thank you,

Appendix C

Ecological Survey Report

WAVERLY – LICK 138KV REBUILD ECOLOGICAL REPORT



PROJECT SITE:

Northeast of State Road 220 and Miller Lane Pike County, Ohio

PREPARED FOR:

AEP Ohio Transmission Company, Inc. 8600 Smiths Mill Road New Albany, Ohio 43054



PREPARED BY:

V3 Companies, Ltd. 619 North Pennsylvania Street Indianapolis, Indiana 46204 (317) 423-0690

October 2023

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EXECUTIVE SUMMARY

V3 Companies, Ltd. (V3) performed an ecological survey and report for the proposed Waverly — Lick 138kV Rebuild project on 29 August 2023. The project consists of removing two structures, installing six structures to reroute the line, and associated access roads northeast of State Road 220 and Millers Lane in Pike County, Ohio (SITE). V3 reached the following conclusions based on review of available and reasonably ascertainable federal, state, and local resources, and a SITE inspection conducted on the date referenced above.

- Two streams, ST-32F-INT and ST-32-INT, were identified within the SITE area. The streams may
 qualify as a federally jurisdictional "Water of the U.S." subject to U.S. Army Corps of Engineers
 (USACE) and Ohio Environmental Protection Agency (OEPA) authority. However, at the time of
 this writing, guidance from the agencies to determine the jurisdictional status of these streams
 is pending.
- Two wetlands, WL-32F-PEM and WL-32A-PEM, were identified within the SITE. WL-32F-PEM appears to have a connection to ST-32F-INT and therefore may be subject to USACE and OEPA authority. WL-32A-PEM does not appear to have a connection to a "Waters of the U.S." and would likely be considered isolated and subject to OEPA.
- An official species list obtained from the United States Fish and Wildlife Service (USFWS) Information Planning and Consultation (IPaC) website indicated that the SITE is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*), the proposed endangered tricolored bat (*Perimyotis subflavus*), and the monarch butterfly (*Danaus plexippus*), a candidate for listing under the Endangered Species Act. V3 did observe potential roost trees on-SITE at the time of the SITE reconnaissance. The USFWS made recommendations to avoid impacts to on-SITE streams and to avoid clearing potential roost trees for the federally listed bat species outside the recommended seasonal clearing dates, 31 March to 1 October. The USFWS stated the due to the project, type, size, and location, the agency does not anticipate adverse effects to any other federally endangered, threatened, or proposed species or proposed or designated critical habitat.
- A review of the Ohio Natural Heritage Database with the Ohio Department of Natural Resources (ODNR) indicates there are no records of state or federally listed plants or animals within one mile of the project area. Additionally, the ODNR Division of Fish and Wildlife stated that the project is within range of 23 threatened or endangered species. The ODNR stated that the project is not likely to impact these species and provided recommendations to avoid and minimize impact to these species and their habitats.



CHAPTER 1 INTRODUCTION

This report has been prepared solely in accordance with an agreement between American Electric Power ("CLIENT") and V3 Companies ("V3"), Ltd.

The services performed by V3 have been conducted in a manner consistent with the level of quality and skill generally exercised by members of its profession and consulting practices relating to this type of engagement.

This report is solely for the use of CLIENT and was prepared based upon an understanding of CLIENT's specific objective(s) and based upon information obtained by V3 in furtherance of CLIENT's specific objective(s). Any reliance of this report by third parties shall be at such third party's sole risk as this report may not contain, or be based upon, sufficient information for purposes of other parties, for their objectives, or for other uses. This report shall only be presented in full and may not be used to support any other objectives than those for CLIENT as set out in the report, except where written approval and consent are expressly provided by CLIENT and V3.

1.1 INTRODUCTION

The purpose of this investigation was to conduct an ecological survey and report of the SITE to evaluate potential land development permitting requirements regarding natural resources. In this report, V3 provides a detailed description of the information reviewed and collected as part of the scope of work for this project. V3 summarizes the jurisdictional framework applicable to this project, provides a desktop review of relevant and publicly available documents, and details information collected during the SITE reconnaissance including a wetlands determination, an evaluation of the potential presence of other natural resources within the SITE boundary, and a discussion of endangered, threatened, and rare (ETR) species and habitat. The Conclusions section summarizes V3's findings, addresses potential areas of concern and permitting, regulatory, and other relevant issues.

The SITE is located northeast of State Road 220 and Miller Lane in Pike County, Ohio (Figure 1).



CHAPTER 2 JURISDICTIONAL RESOURCES

2.1 WETLANDS

Wetlands offer a variety of functions and values that may include, but are not limited to, groundwater recharge/discharge, flood flow alteration, sediment/toxicant retention, and fish and wildlife habitat. Because of the perceived functions and values of wetlands, USACE developed the Wetlands Delineation Manual, (1987 Manual)¹ to identify wetlands.

Wetlands are defined in the 1987 Manual as, "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." The 1987 Manual outlines the protocol for distinguishing wetland areas from "upland" areas. Wetland areas are delineated according to three primary criteria: vegetation, soil, and hydrology. An area is determined to qualify as a wetland if it meets the following "general diagnostic environmental characteristics:"

- Hydrophytic vegetation
- Hydrology
- Hydric Soil

¹ USACE. Waterways Experiment Station. Wetlands Research Program. "Corps of Engineers Wetlands Delineation Manual." Vicksburg, MS: Environmental Laboratory, 1987



CHAPTER 3 DESKTOP REVIEW

V3 reviewed applicable, readily available, and accessible historical information for the potential presence of wetlands, "Waters of the U.S.," and other natural resources.

3.1 UNITED STATES GEOLOGICAL SURVEY 7.5-MINUTE QUADRANGLE MAP

A USGS 7.5-Minute Quadrangle map displays contour lines to portray the shape and elevation of the land surface. Quadrangle maps render the three-dimensional changes in elevation of the terrain on a two-dimensional surface. The maps usually portray both manmade and natural topographic features. Although they show lakes, rivers, various surface water drainage trends, vegetation, etc., they typically do not provide the level of detail needed for accurate evaluation of wetlands. However, the existence of these features may suggest the potential presence of wetlands.

The SITE is situated in the Waverly South, Ohio, USGS 7.5-Minute Quadrangle. V3 evaluated the topography and concluded that the SITE elevation ranges from approximately 655 to 695 feet above mean sea level. One intermittent stream is mapped within the eastern portion of the SITE (**Figure 1**).

3.2 NATIONAL WETLANDS INVENTORY MAP

National Wetlands Inventory (NWI) maps were developed to meet a USFWS mandate to map the wetland and deepwater habitats of the U.S. These maps were developed using high altitude aerial photographs and USGS Quadrangle maps as a topographic base. Indicators that exhibited predetermined wetland characteristics, visible in the photographs, were identified according to a detailed classification system. The NWI map retains some of the detail of the Quadrangle map; however, it is used primarily for demonstration of wetland areas identified by the agency. The maps are accurate to a scale of 1:24,000. In general, the NWI information requires field verification.

NWI data is shown projected over aerial photography in **Figure 2**. One NWI feature, a riverine, intermittent, streambed, seasonally flooded (R4SBC) polygon is mapped within the SITE. The presence of NWI features mapped partially or fully within the SITE area suggests the potential presence of wetlands or other regulated aquatic features on-SITE.

3.3 FLOOD INSURANCE RATE MAP

The Federal Emergency Management Agency (FEMA) was developed in 1979 to reform disaster relief and recovery, civil defense, and to prepare and mitigate for natural hazards. The Mitigation Division of FEMA manages the National Flood Insurance Program which provides guidance on how to lessen the impact of disasters on communities through flood insurance, floodplain management, and flood hazard mapping. Proper floodplain management has the ability to minimize the extent of flooding and flood damage and improve stormwater quality by reducing stormwater velocities and erosion. The one percent annual chance flood (100-year flood) boundary must be kept free of encroachment as the national standard for the program.

V3 reviewed National Flood Hazard Zone data for Pike County, Ohio. No portion of the SITE is mapped within a Flood Zone or Floodway (Figure 2).

3.4 UNITED STATES DEPARTMENT OF AGRICULTURE SOIL SURVEY

V3 reviewed the soils mapped on-SITE in the Natural Resource Conservation Service (NRCS) digital soil survey data for Pike County, Ohio. This data is projected over aerial photography, illustrating distinct soil map unit boundaries, in **Figure 3**. Two soil units are classified on-SITE (**Table 1**).



Table 1: Soil Units On-SITE

Map Soil Symbol	Description	Hydric Soil	
Omu1A1	Omulga silt loam, 0 to 2 percent slopes	No	
Omu1B1	Omulga silt loam, 2 to 6 percent slopes	No	

None of the soil units mapped within the SITE area is considered hydric in Pike County, Ohio. Soils are considered hydric if more than 50 percent of the soil contains hydric components according to the NRCS Web Soil Survey. The presence of hydric soil units within the SITE area suggests appropriate wetland soils are located on-SITE.

3.5 ENDANGERED, THREATENED, AND RARE SPECIES EVALUATION

An official species list obtained from the USFWS IPaC website indicated that the SITE is within the ranges of the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*), the proposed endangered tricolored bat (*Perimyotis subflavus*), and the monarch butterfly (*Danaus plexippus*), a candidate for listing under the Endangered Species Act. The USFWS made recommendations to avoid impacts to on-SITE streams and wetlands, and to avoid clearing potential roost trees for the federally listed bat species outside the recommended seasonal clearing dates, 31 March to 1 October. The USFWS stated the due to the project, type, size, and location, the agency does not anticipate adverse effects to any other federally endangered, threatened, or proposed species or proposed or designated critical habitat.

A review of the Ohio Natural Heritage Database with the ODNR indicates there are no records of state or federally listed species within one mile of the project area. Additionally, the ODNR Division of Fish and Wildlife stated that the project is within range of 23 threatened or endangered species (**Table 2**). The ODNR stated that the project is not likely to impact these species and provided recommendations to avoid and minimize impact to these species and their habitats.

ODNR recommended a desktop habitat assessment followed by a field assessment, if needed, to identify if potential bat hibernacula are present within the Project area. V3 completed a desktop assessment including data on known abandoned or active mines and locations known or suspected of karst geology. The desktop assessment identified no karst features or mine openings within 0.25 mile of the Project area. Further, no suitable bat hibernacula were observed during the field reconnaissance.

Based on the documentation referenced above, additional correspondence with the agencies does not appear to be warranted at this time. If federal permitting or federal financing will be used in future development, additional coordination may be necessary. Copies of agency correspondence can be referenced in **Appendix A**.



Table 2 : ETR Species List

Scientific Name	Common Name	State Listed Status	Federally Listed Status	Typical Habitat Description	Habitat Observed In Survey Area	Avoidance Dates	Agency Comment (Appendix A)	Potential Impacts		
Mussels										
Pleurobema clava	Club shell	Endangered	Endangered	Perennial streams	No	N/A		No		
Villosa fabalis	Rayed bean	Endangered	Endangered	Perennial streams	No	N/A		No		
Epioblasma torulosa rangiana	Northern riffleshell	Endangered	Endangered	Perennial streams	No	N/A	ODNR - Proposed project not likely to impact this	No		
Megalonaias nervosa	Washboard	Endangered	N/A	Perennial streams	No	N/A	species.	No		
Pleurobema cordatum	Ohio pigtoe	Endangered	N/A	Perennial streams	No	N/A		No		
Lampsilis teres	Yellow sandshell	Endangered	N/A	Perennial streams	No	N/A		No		
	Fishes									
Notropis boops	Bigeye shiner	Endangered	N/A	Perennial streams	No	15 March to 30 June	ODNR - Proposed project	No		
Hiodon alosoides	Goldeye	Endangered	N/A	Perennial streams	No	15 March to 30 June		No		
Notropis ariommus	Popeye shiner	Endangered	N/A	Perennial streams	No	15 March to 30 June	not likely to impact this species.	No		
Macrhybopis hyostoma	Shoal club	Endangered	N/A	Perennial streams	No	15 March to 30 June	7, -1, -1,	No		
Lepisosteus platostomus	Shortnose gar	Endangered	N/A	Perennial streams	No	15 March to 30 June		No		
Scaphirhynchus platorynchus	Shovelnose sturgeon	Endangered	N/A	Perennial streams	No	15 March to 30 June		No		
Percina copelandi	Channel darter	Threatened	N/A	Perennial streams	No	15 March to 30 June		No		
Polyodon spathula	Paddlefish	Threatened	N/A	Perennial streams	No	15 March to 30 June		No		
Percina shumardi	River darter	Threatened	N/A	Perennial streams	No	15 March to 30 June		No		



Mammals									
Myotis lucifugus	Little brown bat	Endangered	N/A		Yes	1 April to 30 September	ODNR/USFWS – Cutting of trees is recommended between 1 October and 31 March. If seasonal tree cutting is not possible, a mist net survey or acoustic survey may be conducted by an approved surveyor between 1 June and 15 August. ODNR - If a habitat assessment finds that potential hibernacula are present within 0.25 mile of the project area, please	No - Impacts are avoided with winter tree clearing. If winter tree clearing is not feasible, presence/absenc e surveys may be needed.	
Myotis septentrionalis	Northern long-eared bat	Endangered	Threatened	Predominately roost in trees behind loose,	Yes	1 April to 30 September			
Myotis sodalis	Indiana bat	Endangered	Endangered	exfoliating bark, in crevices and cavities, or in the leaves. These species are also dependent on the forest structure surrounding roost trees	Yes	1 April to 30 September	send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the Division of Wildlife (DOW) recommends a 0.25-mile tree cutting and subsurface disturbance		
Perimyotis subflavus	Tricolored bat	Endangered	Proposed Endangered		Yes	1 April to 30 September	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.		



Reithrodontomys humulis	Eastern harvest mouse	Threatened	N/A	Early successional habitats dominated by herbaceous vegetation with less than 30% woody material	Yes	N/A	ODNR - The DOW recommends that early successional habitats be preserved where possible.	TBD - If early successional habitats won't be impacted, this project is not likely to impact this species.
				Reptiles				
Crotalus horridus	Timber rattlesnake	Endangered	Special Concern	Woodland species, utilizing dry slopes and rocky outcrops. Utilizes sunlit gaps in the canopy for basking and deep rock crevices for overwintering	No	N/A	ODNR – Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.	No
				Amphibians				
Scaphiopus holbrookii	Eastern spadefoot toad	Endangered	N/A	Areas of sandy soils associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions	No	N/A	ODNR – Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.	No
Pseudotriton montanus diastictus	Midland mud salamander	Threatened	N/A	Under large, flat stones along shallow, sluggish woodland streams, springs, and seeps ²	No	N/A		No

² Ohio Partners in Amphibian and Reptile Conservation. Accessed October 2023. Midland Mud Salamander (Pseudotriton montanus diasticutis) - Ohio Herp Atlas – OHPARC



CHAPTER 4 SITE RECONNAISSANCE

4.1 METHODOLOGY

V3 conducted a field investigation at the SITE on 29 August 2023. During this investigation, V3 noted the presumed land use of the SITE and surrounding area and evaluated the SITE for the potential presence of wetlands, "waters of the U.S.," and natural resources using the findings of the desktop review and field observations. Photographs were taken during the field investigation and are provided in **Appendix B**.

V3 used the Routine Determination Method (RDM) with an established baseline and transects as described in the 1987 Manual for typical sites over five acres. V3 recorded data from a number of data points (DP) along the transect as a function of diversity of vegetation, property size, soil types, habitat variability, and other SITE features as deemed appropriate by V3. Where evidence of a wetland was suspected, three wetland criteria were applied to determine if the area in question was representative of a wetland using the methodology set forth by USACE. More specifically, V3 visually examined and recorded the dominant vegetation, recorded soil properties such as texture and color using the Munsell Soil Color Chart (Munsell Color Chart), excavated soil pits, and evaluated the primary and secondary hydrologic indicators as discussed in Section 2.1.2.

If all three criteria were met, i.e. vegetation, soil properties, and hydrologic indicators, a second DP was established adjacent to the wetland DP in an area outside of the presumed wetland boundary for the purpose of delineating between the wetland and non-wetland areas. Once delineated, V3 continued the RDM to evaluate the remainder of the SITE.

4.2 SITE AND ADJACENT PROPERTY LAND USE

Land use on-SITE is an active landfill and fallow land. Adjacent land use consists of woodland, agricultural land, residential areas, and turf.

4.3 WETLAND SUMMARY

Two wetlands were identified during this investigation based upon the methodology set forth in the 1987 Manual and the Eastern Mountains and Piedmont Regional Supplement. Information that V3 collected at each DP on 29 August 2023 is described in the following section. This information is summarized on the forms provided in Appendix C. The Ohio Rapid Assessment Method (ORAM) form for each of the wetlands is included as Appendix D. An overall SITE delineation map showing placement of the DPs is included as Figure 4.

4.3.1 Wetland WL-32F-PEM – $(\pm 0.05$ -acre PEM Delineated)

Wetland WL-34F-PEM was situated northwest of an existing structure and consisted of approximately 0.05 acres of PEM. WL-32F-PEM appears to continue north of the study area. WL-32F-PEM appears to have a connection to ST-32F-INT and therefore may be subject to USACE and OEPA authority. WL-32F-PEM has an ORAM score of 22 and is classified as a Category 1 wetland (**Appendix D**).

DP-WL-32F

This DP was collected in the southern portion of WL-32F-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of narrow-leaf cattail (*Typha angustifolia*, OBL, 30%), devil's pitchfork (*Bidens frondosa*, FACW, 20%), and common boneset (*Eupatorium perfoliatum*, FACW, 20%). The soil profile met the depleted matrix (F3) indicator for hydric soil. Evidence of wetland hydrology included a high water table (A2) and saturation (A3) at



the surface, oxidized rhizospheres on living roots (C3), geomorphic position (D2), and FAC-neutral test (D5).

DP-UPL-32F

This DP was collected in the upland area adjacent to DP-WL-32F. This area met the soil criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (*Schedonorus arundinaceus*, FACU, 60%) and Japanese honeysuckle (*Lonicera japonica*, FACU, 25%). The soil profile met the depleted matrix (F3) indicator for hydric soil. No indicators of wetland hydrology were observed.

4.3.2 Wetland WL-32A-PEM – $(\pm 0.24$ -acre PEM Delineated)

Wetland WL-32A-PEM is situated in the northwestern portion of the SITE and consisted of approximately 0.24 acres of palustrine emergent wetland (PEM). Wetland WL-32A-PEM appears to continue north and south of the study area. Wetland WL-32A-PEM did not appear to have a hydrologic connection with any federally jurisdictional "Waters of the U.S.," and as such would likely be considered isolated and subject to regulation by OEPA. WL-34A-PEM has an ORAM score of 29 and is classified as a Category 1 wetland (Appendix D).

DP-WL-32A

This DP was collected in the southern portion of Wetland WL-32A-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of rice cut grass (*Leersia oryzoides*, OBL, 70%) and large barnyard grass (*Echinochloa crus-galli*, FACW, 20%). The soil profile met the depleted matrix (F3) indicator for hydric soil. Evidence of wetland hydrology included oxidized rhizospheres on living roots (C3), geomorphic position (D2), and FAC-neutral test (D5).

DP-UPL-32A

This DP was collected in the upland area adjacent to DP-WL-32A. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of false boneset (*Brickellia eupatorioides*, Canadian horseweed (*Erigeron canadensis*, FACU, 30%), and devil's pitchfork (FACW, 25%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

Location ORAM **Proposed Impacts** Delineated Habitat Wetland ID Isolated? Temporary Permanent Area Type Latitude Longitude Score Category **Matting Area** Impact Area (acre)* (acre) (acre) WL-32A-PEM 39.078065° -82.959724° Yes PEM ±0.24 29 1 TBD **TBD** WL-32F-PEM -82.956825° PEM ±0.05 TBD **TBD** 39.076581° No 22 1

Table 3: Delineated Wetlands Identified within the Survey Area



^{*}Continues off-SITE

4.4 DATA POINT SUMMARY

Following is a description of the information collected at each DP during the 29 August 2023 field investigation. The data points named in reference to the nearest structure. Information that was collected at each DP is summarized on the forms provided in **Appendix C**. DP placement is shown in **Figure 4**.

DP 32B

This DP was collected south of Structure 32B. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of red clover (*Trifolium pratense*, FACU, 30%), yellow bristle grass (*Setaria pumila*, FAC, 30%), and English plantain (*Plantago lanceolata*, FACU, 25%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 32C

This DP was collected south of Structure 32C. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Kentucky blue grass (*Poa pratensis*, FACU, 30%), purple dead nettle (*Lamium purpureum*, UPL, 20%), and English plantain (*Plantago lanceolata*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 32D

This DP was collected east of Structure 32D. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of multiflora rose (*Rosa multiflora*, FACU, 30%), black raspberry (*Rubus occidentalis*, UPL, 15%), tall false rye grass (FACU, 30%), and Canadian goldenrod (*Solidago canadensis*, FACU, 20%). No indicators of hydric soils were observed.

DP 32E

This DP was collected east of Structure 32E. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of box-elder (*Acer negundo*, FAC, 15%), shagbark hickory (*Carya ovata*, FACU, 10%), autumn olive (*Elaeagnus umbellate*, UPL, 30%), European privet (*Ligustrum vulgare*, FACU, 20%), and Johnson grass (*Sorghum halepense*, FACU, 40%. No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 32F

This DP was collected north of Structure 32F. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of autumn olive (UPL, 10%), black raspberry (UPL, 5%), Canadian thistle (*Cirsium arvense*, FACU, 30%), American pokeweed (*Phytolacca americana*, FACU, 20%), and Canadian goldenrod (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP AR1

This DP was collected in the southern portion of the access road. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of American sycamore (*Platanus occidentalis*, FACW, 15%), autumn olive (UPL, 30%), northern catalpa (*Catalpa speciosa*, FAC, 10%), tall false rye grass (FACU, 25%), alfalfa



(*Medicago sativa*, UPL), and red clover (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP AR2

This DP was collected in the eastern portion of the access road. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of red clover (FACU, 30%), yellow bristlegrass (*Setaria pumila*, FAC, 30%), and tall false rye grass (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

4.5 DRAINAGE FEATURES, STREAMS, AND OTHER POTENTIAL "WATERS OF THE U.S."

Two streams were identified during this investigation using the methods described in Chapter 2. Information that V3 collected at each feature on 29 August 2023 is described in the following section. An overall SITE delineation map is included as **Figure 4**. The Primary Headwater Habitat Evaluation Index (HHEI) for the streams is included as **Appendix E**.

4.5.1 ST-32F-INT — (±112-linear feet Delineated, Intermittent)

ST-32F-INT is located west of structure 32F and in the northern portion of the access road and consisted of approximately 112 linear feet of intermittent stream within the SITE area. The substrate of ST-32F-INT consisted of cobble, gravel, sand, clay, and silt. ST-32F-INT has an HHEI score of 65 and is classified as a Class II Primary Headwater. ST-32F-INT exhibited an OHWM and may qualify as federally jurisdictional "Waters of the U.S." subject to USACE and OEPA authority.

4.5.2 $ST-32-INT - (\pm 140-linear feet Delineated, Intermittent)$

ST-32-INT is located north of structure 32F and consisted of approximately 140 linear feet of intermittent stream within the SITE area. The substrate of ST-32-INT consisted of gravel, sand, clay, and silt. ST-32-INT has an HHEI score of 49 and is classified as a Class II Primary Headwater. ST-32-INT exhibited an OHWM and may qualify as federally jurisdictional "Waters of the U.S." subject to USACE and OEPA authority.

Table 4: Delineated Stream Identified Within the Survey Area

	Loc	ation					F			
Feature	Latitude	Longitude	Stream Type	Delineated Length (LF)	Bankfull Width (feet)	OHWM Width (feet)	Method	Score	Category / OEPA Rating / 401 OAC Eligibilit Designation	
ST-32F-INT	39.075281°	-82.957168°	Intermittent	±112 LF	10	5	HHEI	65	Class II Primary Headwater	Eligible
ST-32-INT	39.076016°	-82.956562°	Intermittent	±140 LF	9	3	HHEI	49	Class II Primary Headwater	Eligible



CHAPTER 5 CONCLUSIONS

On 29 August 2023, V3 performed an ecological survey and report for the SITE situated in Pike County, Ohio.

Two streams, ST-32F-INT and ST-32-INT, were identified within the SITE area. The streams may qualify as a federally jurisdictional "Water of the U.S." subject to USACE and OEPA authority. However, at the time of this writing, guidance from the agencies to determine the jurisdictional status of these streams is pending.

Two wetlands, WL-32F-PEM and WL-32A-PEM, were identified within the SITE. WL-32F-PEM appears to have a connection to ST-32F-INT and may be subject to USACE and OEPA authority. WL-32A-PEM does not appear to have a connection to a "Waters of the U.S." and should be considered isolated and subject to OEPA.

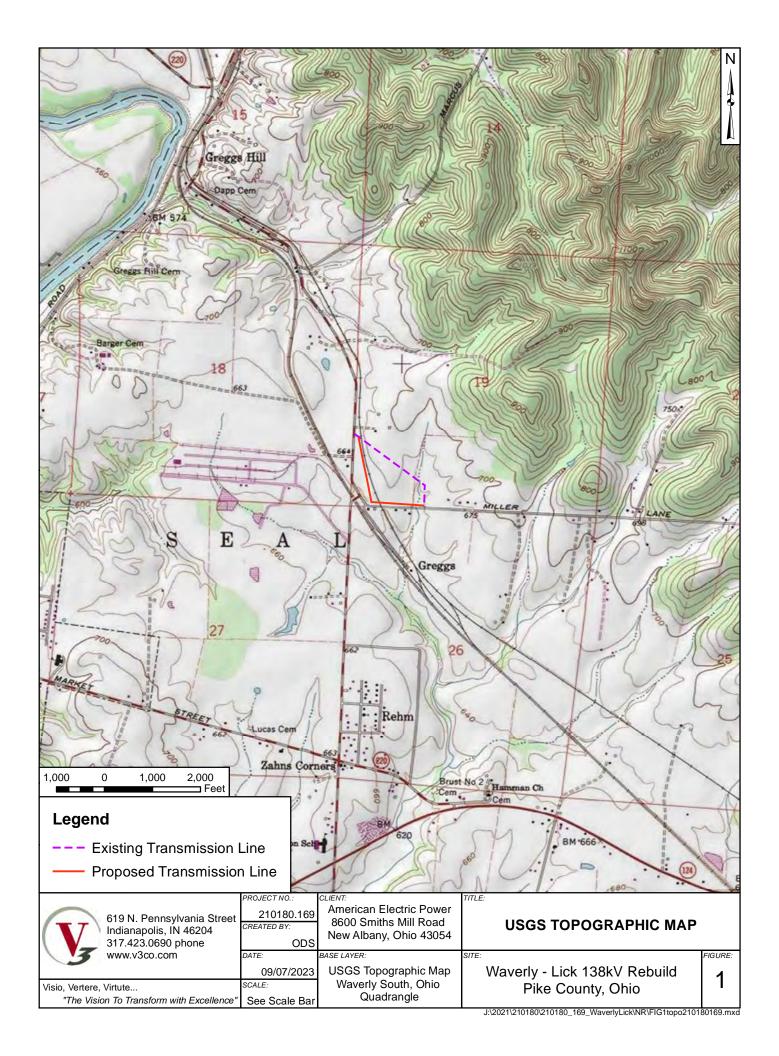
An official species list obtained from the USFWS IPaC website indicated that the SITE is within the ranges of the federally endangered Indiana bat and northern long-eared bat (*Myotis septentrionalis*), the proposed endangered tricolored bat, and the monarch butterfly, a candidate for listing under the Endangered Species Act. V3 did observe potential roost trees on-SITE at the time of the SITE reconnaissance. The USFWS made recommendations to avoid impacts to on-SITE streams and to avoid clearing potential roost trees for the federally listed bat species outside the recommended seasonal clearing dates, 31 March to 1 October. The USFWS stated the due to the project, type, size, and location, the agency does not anticipate adverse effects to any other federally endangered, threatened, or proposed species or proposed or designated critical habitat.

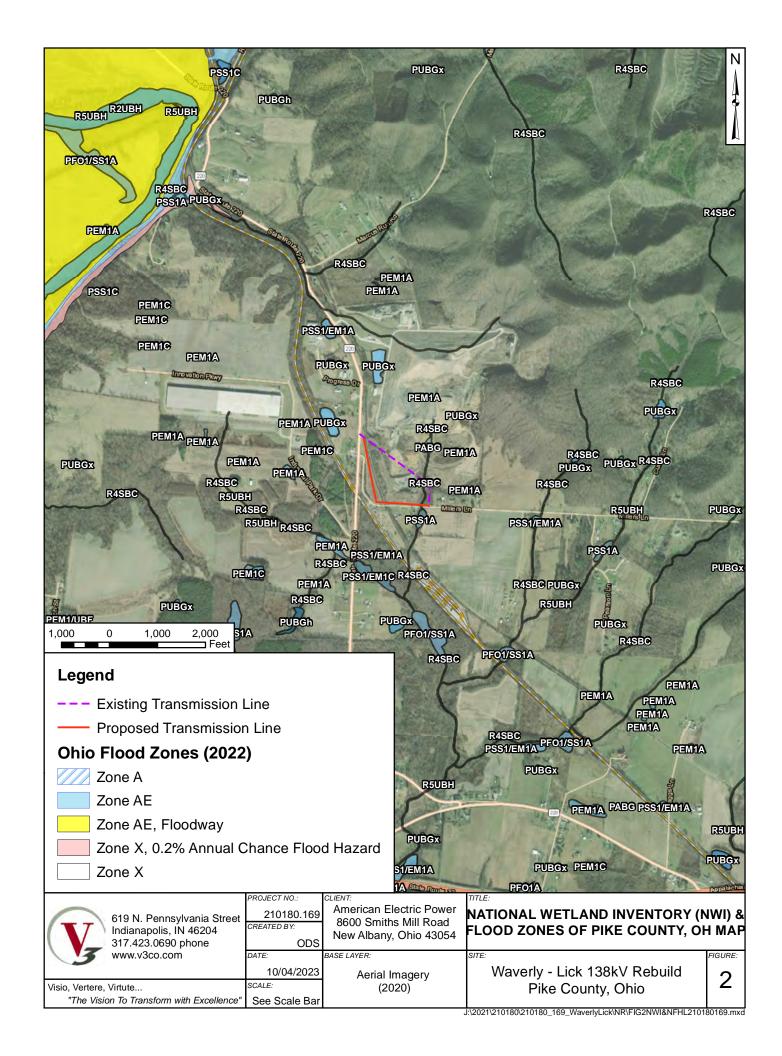
A review of the Ohio Natural Heritage Database with the ODNR indicates there are no records of state or federally listed species within one mile of the project area. Additionally, the ODNR Division of Fish and Wildlife stated that the project is within range of 23 threatened or endangered species. The ODNR stated that the project is not likely to impact these species and provided recommendations to avoid and minimize impact to these species and their habitats.

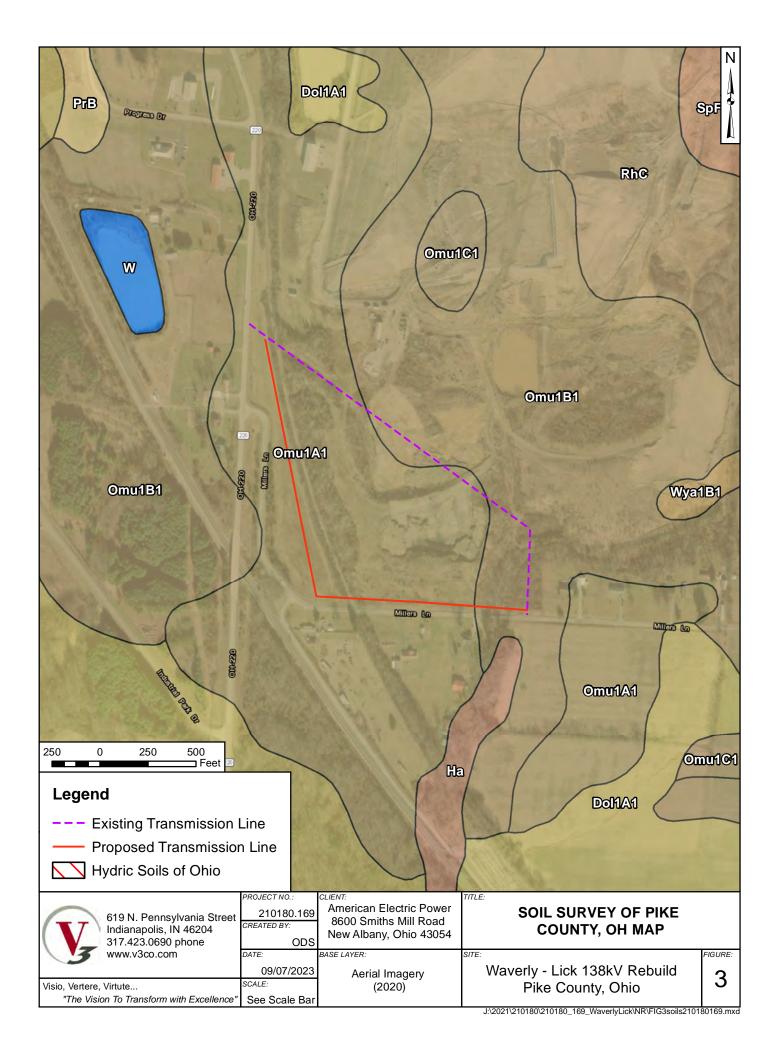


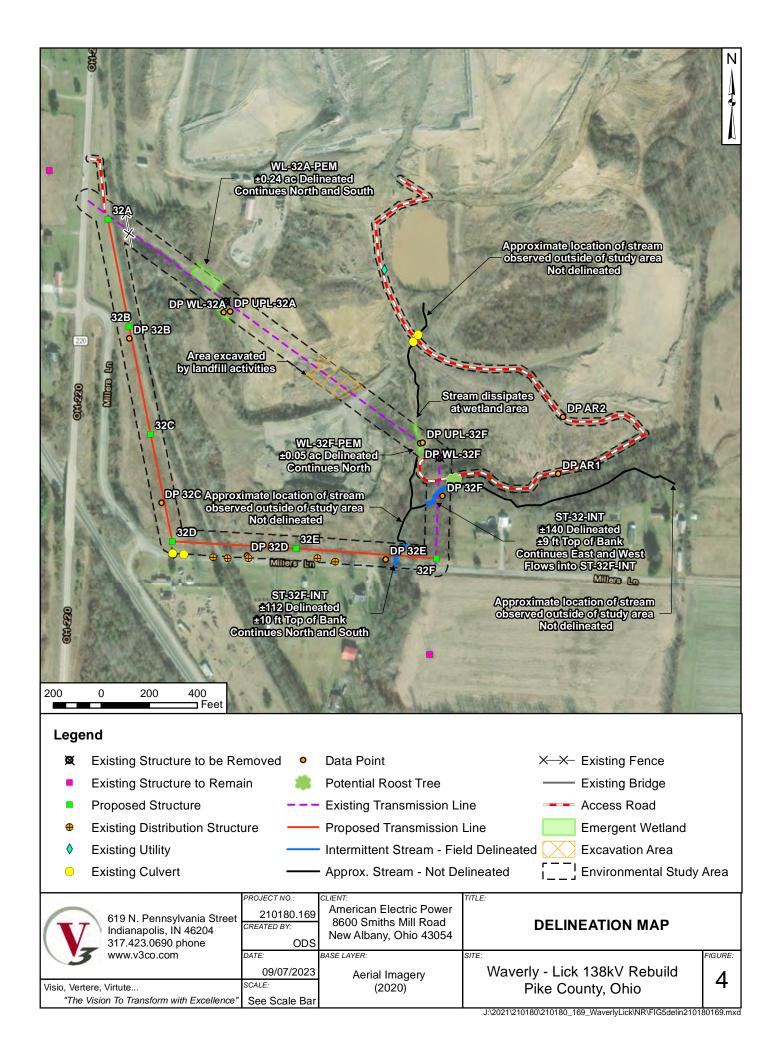
FIGURES











APPENDIX A

ETR Species Correspondence





United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office 4625 Morse Road, Suite 104 Columbus, OH 43230-8355 Phone: (614) 416-8993 Fax: (614) 416-8994

In Reply Refer To: August 17, 2023

Project Code: 2023-0118076

Project Name: Waverly - Lick Rebuild

Subject: List of threatened and endangered species that may occur in your proposed project

location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ohio Ecological Services Field Office 4625 Morse Road, Suite 104 Columbus, OH 43230-8355 (614) 416-8993

PROJECT SUMMARY

Project Code: 2023-0118076

Project Name: Waverly - Lick Rebuild

Project Type: Transmission Line - Maintenance/Modification - Above Ground Project Description: The project involves the relocation of 2 structures with 0.5 miles of

rebuild located northeast of State Road 220 and Millers Lane in Pike

County, Ohio.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.0772726,-82.95803231546668,14z



Counties: Pike County, Ohio

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered
INSECTS NAME	STATUS

Monarch Butterfly *Danaus plexippus*Candidate

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: V3 Companies Name: Olivia Speckman

Address: 619 N Pennsylvania Street

City: Indianapolis

State: IN Zip: 46204

Email ospeckman@v3co.com

Phone: 3174230690

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



August 31, 2023

Project Code: 2023-0118076

Dear Ms. Olivia Speckman:

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

Federally Threatened and Endangered Species: The endangered Indiana bat (Myotis sodalis) and northern long-eared bat (Myotis septentrionalis) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: The proposed project is in the vicinity of one or more confirmed records of Indiana bats and/or northern long-eared bats. Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.

<u>Federally Proposed Species</u>: On September 14, 2022, the Service proposed to list the tricolored bat (*Perimyotis subflavus*) as endangered under the ESA. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. During spring, summer, and fall, this species roosts primarily among leaf clusters of live or recently dead trees, emerging at dusk to hunt for insects over waterways and forest edges. While white-nose syndrome is by far the most serious threat to the tricolored bat, other threats now have an increased significance due to the dramatic decline in the species' population. These threats include disturbance to bats in roosting, foraging, commuting, and over-wintering habitats. Mortality due to collision with wind turbines, especially during migration, has also been documented across their range. Conservation measures for the Indiana bat and northern longeared bat will also help to conserve the tricolored bat.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

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

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

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,

Jeromy Applegate

Acting Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW Eileen Wyza, ODNR-DOW



MARY MERTZ, DIRECTOR

Fax: (614) 267-4764

Office of Real Estate Tara Paciorek, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229 Phone: (614) 265-6661

October 2, 2023

Olivia Speckman V3 Companies 619 North Pennsylvania Street Indianapolis, Indiana 46204

Re: 23-1009; Waverly-Lick Rebuild

Project: The proposed project involves the relocation of approximately 0.5 miles of transmission line.

Location: The proposed project is located in Seal Township, Pike 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 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 ≥ 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*) Northern riffleshell (*Epioblasma torulosa rangiana*) rayed bean (*Villosa fabalis*)

State Endangered

Ohio pigtoe (*Pleurobema cordatum*) washboard (*Megalonaias nervosa*) yellow sandshell (*Lampsilis teres*)

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

bigeye shiner (Notropis boops)
goldeye (Hiodon alosoides),
popeye shiner (Notropis ariommus),
shoal chub (Macrhybopsis hyostoma),
shortnose gar (Lepisosteus platostomus),
shovelnose sturgeon (Scaphirhynchus platorynchus),

State Threatened

blue sucker (*Cycleptus elongatus*), channel darter (*Percina copelandi*), paddlefish (*Polyodon spathula*) river darter (*Percina shumardi*),

The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the timber rattlesnake (*Crotalus horridus*), a state endangered species, and a federal species of concern. The timber rattlesnake is a woodland species. In addition to using wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the midland mud salamander (*Pseudotriton montanus diastictus*), a state threatened species. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern harvest mouse (*Reithrodontomys humulis*), a state threatened species. This species relies on early successional habitats dominated by herbaceous vegetation with less than 30% woody material. The DOW recommends that early successional habitats be preserved where possible. If early successional habitats won't be impacted, this project is not likely to impact this species.

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

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

The <u>local floodplain administrator</u> 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 B

SITE PHOTOGRAPHS



Photo: 1 WL-32A-PEM

Direction of View:

West

Date:

29 August 2023



Photo: 2 WL-32A-PEM

Direction of View:

Southeast

Date:

29 August 2023



Photo: 3 WL-32A-PEM

Direction of View:

Southwest

Date:



Photo: 4 WL-32A-PEM

<u>Direction of View:</u> North

Date:

29 August 2023



Photo: 5
DP UPL-32A

Direction of View:

East

Date:

29 August 2023



Photo: 6
DP UPL-32A

Direction of View:

Northwest

Date:



Photo: 7 WL-32F-PEM

Direction of View:

West

Date:

29 August 2023



Photo: 8 WL-32F-PEM

Direction of View:

South

Date:

29 August 2023



Photo: 9 WL-32F-PEM

Direction of View:

West

Date:



Photo: 10 WL-32F-PEM

<u>Direction of View:</u> North

Date:

29 August 2023



Photo: 11 DP UPL-32F

Direction of View:

East

Date:

29 August 2023



Photo: 12 DP UPL-32F

Direction of View:

Northwest

Date:



Photo: 13

ST-32F-INT off Millers Road

Direction of View:

East

Date:

29 August 2023



Photo: 14

ST-32F-INT off Millers Road

Direction of View:

West

Date:

29 August 2023



Photo: 15

ST-32F-INT off Access Road

Direction of View:

North

Date:



Photo: 16

ST-32F-INT off Access

Road

Direction of View:

North

Date:

29 August 2023



Photo: 17

ST-32-INT

Direction of View:

Southwest

Date:

29 August 2023



Photo: 18 ST-32-INT

Direction of View:

West

Date:



Photo: 19 DP 32B

<u>Direction of View:</u> South

Date:

29 August 2023



Photo: 20 DP 32C

Direction of View:

North

Date:

29 August 2023



Photo: 21 DP 32D

Direction of View:

East

Date:



Photo: 22 DP 32E

<u>Direction of View:</u> West

Date:

29 August 2023



Photo: 23 DP 32F

Direction of View:

South

Date:

29 August 2023



<u>Photo: 24</u> Excavation Area

<u>Direction of View:</u> North

Date:



Photo: 25 Access Road

<u>Direction of View:</u> South

Date:

29 August 2023



Photo: 26 Access Road

Direction of View:

East

Date:



APPENDIX C

DATA FORMS



Site: Client:		y Lick 138k\ ican Electric : N. Houk. E	Power	City/County: State: OH		Pike County Township, Range: Landform		29 August 2023 Data Point: <u>WL-32F</u> Sec 19, T 5N, R 21W rraces Local Relief Convex
	Slope (%)	: 1-3	Lat.		Long.		Datum	NAD 83 NWI Class: N/A
Soil Ma	ap Unit Name:	Omulga sili	t loam, 2 to 6 pe	ercent slopes				
Ci	ilmatic/hydrolo	gic condition	s typical for time	e of year?	Y/N Y drology	significantly disturbed		
	Vegetation)	, Soil . Soil	or Hv	drology	naturally problematic		
	ormal Circumst	tances Prese	ent? Yo	es X	No			
SUMM	MARY OF FIND		1-1' D10	V V				
	Hyard		tation Present? c Soil Present?		No No	=	lo tha [OP within a Wetland?
	٧		ology Present?		No	-	Yes	X No
Remar	rks:	Meets all v	vetland criteria					
VEGE	TATION			A b = = 1, .t = 0/	Daminant			
Tree S	Stratum	Plot size:	30'	Absolute % Cover	Dominant Species	Indicator Statu	ıs	
1.				Covei	Opecies			Dominance Test Worksheet
2.					· -	· <u></u>		Number of dominant species
3.								that are OBL, FACW, or FAC: Total number of dominant
4. 5.						· -		species across all strata:
J.				0	Total Cover	-		Percent of dominant species
	Stratum	Plot size:	15'					that are OBL. FACW, or FAC:
1.								Prevalence Index Worksheet
2. 3.					· -	-		Total % cover <u>of:</u> OBL species 50 x 1 50
4.					·	-		FACW species 50 x 2 100
5.								FAC species 0 x 3 (
Llorb C	Stratum	Dist size.	- !	0	Total Cover			FACU species 0 x 4 0 0
1.	Typha angust	Plot size: tifolia	5	30	Υ	OBL	1	UPL species 0 x 5 0 Total 100 150
2.	Bidens frondo	osa		20	Y	FACW	2	Prevalence Index: 1.50
	Eupatorium p	erfoliatum		20	Y	FACW	2	Hydrophytic Vegetation Indicators:
	Carex lurida Scirpus cyper	rinus		15 10	N N	OBL FACW	1 2	Rapid Test for Hydrophytic Veg. x Dominance Test is >50%
	Lycopus ame			5	- <u>N</u>	OBL	1	x Prevalence Index is <3.0*
7.								Morphological Adaptations*
8.				400	T-1-1 0	· -		Problematic Hydrophytic Vegetation
Woods	y Vine Stratum	Plot size	15'	100	Total Cover			*Indicators of hydric soil and wetland
1.	y vine Stratum	_ 1 lot 3i2e.	10					hydrology must be present, unless
2.					· ·			disturbed or problematic
	Remarks:	1		0	Total Cover			Hydrophytic Vegetation Present? Yes x No
SOIL	Kemarks.	1					L	Tes ^ NO
	Pro			e to depth ne	eded to docu			absence of indicators.)
	Depth		∕latrix			Redox Featu	ıres	
				Color	9/ Type			Pomorko
	(inches)	Color	%	Color 10YR 5/6		* Loc**	Text	
				Color 10YR 5/6				
	(inches) 0-18	Color 10YR 5/2	% 95	10YR 5/6	5 C	* Loc** M	Texto	L
	(inches) 0-18	Color 10YR 5/2	% 95	10YR 5/6	5 C	* Loc** M =Coated Sand grains	Texto	
	(inches) 0-18 *Type: (Color 10YR 5/2	% 95	10YR 5/6	5 C ced Matrix, CS Hydric Soil I	* Loc** M ==Coated Sand grains	Texto	on: PL=Pore Lining, M=Matrix
	(inches) 0-18 *Type: (Histosol (A1) Histic Epipedo	Color 10YR 5/2 C=Concentra on (A2)	% 95	10YR 5/6	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P	* Loc** M G=Coated Sand grains ndicators: Mineral (\$1) eat or Peat	Texto	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7)
	(inches) 0-18 *Type: (Histosol (A1) Histic Epipedd Black Histic (Color 10YR 5/2 C=Concentra on (A2) A3)	% 95	10YR 5/6	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky Sandy Gleyed	* Loc** M B=Coated Sand grains Indicators: Mineral (S1) eat or Peat Matrix (S4)	Texto	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)
	(inches) 0-18 *Type: (Histosol (A1) Histic Epipede Black Histic (Hydrogen Sul	Color 10YR 5/2 C=Concentra on (A2) A3) fide (A4)	% 95	10YR 5/6	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyec Sandy Redox	* Loc** M ==Coated Sand grains ndicators: Mineral (S1) eat or Peat Matrix (S4) (S5)	Texto	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils
	(inches) 0-18 *Type: (Histosol (A1) Histic Epipedd Black Histic (Color 10YR 5/2 D=Concentra on (A2) A3) fide (A4) ers (A5)	% 95	10YR 5/6	ced Matrix, CS Hydric Soil I Sandy Mucky P Sandy Gleyed Sandy Redox Stripped Matr	* Loc** M =Coated Sand grains ndicators: Mineral (S1) eat or Peat # Matrix (S4) (S5) ix (S6)	Texto	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12)
	(inches) 0-18 *Type: (Histosol (A1) Histic Epipedo Black Histic C Hydrogen Sul Stratified Layo 2 cm Muck (A	Color 10YR 5/2 C=Concentra on (A2) A3) fide (A4) ers (A5) 110) ow Dark Surf	% 95 ition, D=Depletion	10YR 5/6	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyec Sandy Redox Stripped Matrix Loamy Mucky Loamy Gleyer	* Loc** M G=Coated Sand grains ndicators: Mineral (S1) eat or Peat I Matrix (S4) (S5) ix (S6) i Mineral (F1) d Matrix (F2)	Texto	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12)
Doctries of the state of the st	(inches) 0-18 *Type: (Histosol (A1) Histic Epipede Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Bele Thick Dark Su	Color 10YR 5/2 C=Concentra on (A2) A3) fide (A4) ers (A5) 10) ow Dark Surf urface (A12)	% 95 tion, D=Depletion	10YR 5/6	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyec Sandy Redox Stripped Matr Loamy Mucky	* Loc** M G=Coated Sand grains ndicators: Mineral (S1) eat or Peat I Matrix (S4) (S5) ix (S6) i Mineral (F1) d Matrix (F2)	Texto	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12)
Restric	(inches) 0-18 *Type: (Histosol (A1) Histic Epipedo Black Histic C Hydrogen Sul Stratified Layo 2 cm Muck (A	Color 10YR 5/2 C=Concentra on (A2) A3) fide (A4) ers (A5) 10) ow Dark Surf urface (A12)	% 95 tion, D=Depletion ace (A11) Type:	10YR 5/6 on, RM=Redu	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyec Sandy Redox Stripped Matrix Loamy Mucky Loamy Gleyer	* Loc** M G=Coated Sand grains ndicators: Mineral (S1) eat or Peat d Matrix (S4) (S5) ix (S6) ' Mineral (F1) d Matrix (F2) rix (F3)	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other
F	(inches) 0-18 *Type: (Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belc Thick Dark Su citive Layer (if	Color 10YR 5/2 C=Concentra on (A2) A3) fide (A4) ers (A5) 10) ow Dark Surf urface (A12)	% 95 tion, D=Depletion	10YR 5/6 on, RM=Redu	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyec Sandy Redox Stripped Matrix Loamy Mucky Loamy Gleyer	* Loc** M G=Coated Sand grains ndicators: Mineral (S1) eat or Peat I Matrix (S4) (S5) ix (S6) i Mineral (F1) d Matrix (F2)	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12)
F	(inches) 0-18 *Type: (Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su ictive Layer (if Remarks:	Color 10YR 5/2 C=Concentra on (A2) A3) fide (A4) ers (A5) 110) ow Dark Surfurface (A12) r observed):	% 95 tion, D=Depletion ace (A11) Type:	10YR 5/6 on, RM=Redu	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyec Sandy Redox Stripped Matrix Loamy Mucky Loamy Gleyer	* Loc** M G=Coated Sand grains ndicators: Mineral (S1) eat or Peat d Matrix (S4) (S5) ix (S6) ' Mineral (F1) d Matrix (F2) rix (F3)	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other
F	(inches) 0-18 *Type: (Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belc Thick Dark Su citive Layer (if	Color 10YR 5/2 C=Concentra on (A2) A3) fide (A4) ers (A5) 10) ow Dark Surf urface (A12) observed):	% 95 Ition, D=Depletion ace (A11) Type: Depth (Inches):	10YR 5/6 on, RM=Redu	ced Matrix, CS Hydric Soil I Sandy Mucky Sandy Gleyed Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed Depleted Mat	* Loc** M G=Coated Sand grains ndicators: Mineral (S1) eat or Peat d Matrix (S4) (S5) ix (S6) ' Mineral (F1) d Matrix (F2) rix (F3)	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No
F	(inches) 0-18 *Type: (Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su ictive Layer (if Remarks:	Color 10YR 5/2 C=Concentra on (A2) A3) fide (A4) fide (A4) on Dark Surface (A12) fobserved): Indicators: Prim	% 95 tion, D=Depletion ace (A11) Type:	10YR 5/6 on, RM=Redu X (check all th	ced Matrix, CS Hydric Soil I Sandy Mucky P Sandy Gleyec Sandy Redox Stripped Matrix Loamy Mucky Loamy Gleyec Depleted Mat	* Loc** M G=Coated Sand grains ndicators: Mineral (S1) eat or Peat I Matrix (S4) (S5) ix (S6) ' Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Pre	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators
HY Wetlan	(inches) 0-18 *Type: (Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belc Thick Dark St ictive Layer (if Remarks: *DROLOGY nd Hydrology Surface Wate High Water Ta	Color 10YR 5/2 C=Concentra con (A2) A3) fide (A4) ers (A5) 10) ow Dark Surf urface (A12) observed): Indicators: Prim er (A1) able (A2)	% 95 Ition, D=Depletion ace (A11) Type: Depth (Inches):	10YR 5/6 on, RM=Redu X (check all th Water Aquat	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyec Sandy Redox Stripped Matr Loamy Mucky Loamy Gleye Depleted Mat at apply) Stained Leave ic Fauna (B13)	* Loc** M S=Coated Sand grains Indicators: Mineral (S1) eat or Peat I Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Preses (B9)	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators Surface Soil Cracks (B6) Drainage Patterns (B10)
HY Wetlan	(inches) 0-18 *Type: 0 Histosol (A1) Histic Epiped Black Histic (r Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belc Thick Dark Su ctive Layer (if Remarks: /DROLOGY nd Hydrology Surface Wate High Water T- Saturation (A)	Color 10YR 5/2 C=Concentra con (A2) A3) fide (A4) ers (A5) 10) cow Dark Surfurface (A12) cobserved): Indicators: Primer (A1) able (A2) 3)	% 95 Ition, D=Depletion ace (A11) Type: Depth (Inches):	10YR 5/6 on, RM=Redu X (check all th Water Aquat True A	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyer Sandy Redox Stripped Matr Loamy Mucky Loamy Gleyer Depleted Mat at apply Stained Leave ic Fauna (B13) Aquatic Plants	* Loc** M S=Coated Sand grains ndicators: Mineral (S1) eat or Peat I Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Pre es (B9) (B14)	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
HY Wetlan	(inches) 0-18 *Type: (Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark So ictive Layer (if Remarks: /DROLOGY nd Hydrology Surface Wate High Water Ti Saturation (Ac Water Marks	Color 10YR 5/2 C=Concentra On (A2) A3) on (A2) indicators: Primer (A1) able (A2) 3) (B1)	% 95 Ition, D=Depletion ace (A11) Type: Depth (Inches):	10YR 5/6 on, RM=Redu X (check all th Water Aquat True / Hydro	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyec Sandy Redox Stripped Matr Loamy Mucky Loamy Gleye Depleted Mat at apply) Stained Leavi ic Fauna (B13 Aquatic Plants gen Sulfide Oc	* Loc** M S=Coated Sand grains ndicators: Mineral (S1) eat or Peat I Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Pro Pes (B9) (B14) dor (C1)	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
HY Wetlan	(inches) 0-18 *Type: (Histosol (A1) Histic Epipede Black Histic (L Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Scictive Layer (if Remarks: /DROLOGY nd Hydrology Surface Wate High Water Ta Saturation (A) Water Marks Sediment Dep	Color 10YR 5/2 C=Concentra on (A2) A3) fide (A4) ers (A5) 10) ow Dark Surf urface (A12) observed): Indicators: Prim able (A2) 3) (B1) oosits (B2)	% 95 Ition, D=Depletion ace (A11) Type: Depth (Inches):	10YR 5/6 on, RM=Redu X (check all th	ced Matrix, CS Hydric Soil I Sandy Mucky Sandy Gleyer Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyer Depleted Mat at apply Stained Leava Aquatic Plants gen Sulfide Octed Rhizosphe	* Loc** M G=Coated Sand grains ndicators: Mineral (S1) eat or Peat I Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Pre es (B9) (B14) dor (C1) es on Living Roots	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
HY Wetlan	(inches) 0-18 *Type: 0 Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Si citive Layer (if Remarks: *TOROLOGY ONLOGY Surface Wate High Water To Saturation (AC Water Mark Se Deposits Algal Mat or 0	Color 10YR 5/2 C=Concentra Con (A2) A3) fide (A4) fide (A4) fide (A5) fide (A12) fobserved): Indicators: Frim fr (A1) able (A2) 3) (B1) coosits (B2) (B3) Crust (B4)	% 95 Ition, D=Depletion ace (A11) Type: Depth (Inches):	10YR 5/6 on, RM=Redu X (check all th Water Aquat True / Hydro X Oxidiz Prese Recer	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyec Sandy Redox Stripped Matr Loamy Mucky Loamy Gleye Depleted Mat at apply) Stained Leave ic Fauna (B13) Aquatic Plants gen Sulfide Oc edd Rhizosphe ence of Reduce it Iron Reducti	* Loc** M S=Coated Sand grains Indicators: Mineral (S1) eat or Peat d Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Pre es (B9) (B14) dor (C1) res on Living Roots d Iron (C4) on in Tilled Soil (C6)	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
HY Wetlan	(inches) 0-18 *Type: 0 Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belc Thick Dark St ictive Layer (if Remarks: *DROLOGY nd Hydrology Surface Wate High Water Tail Saturation (A) Water Mark Se Drift Deposits Algal Mat or 0 Iron Deposits	Color 10YR 5/2 C=Concentra C=	% 95 Ition, D=Depletion ace (A11) Type: Depth (Inches): hary Indicators	10YR 5/6 on, RM=Redu X (check all th	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyer Sandy Redox Stripped Matr Loamy Mucky Loamy Gleyer Depleted Mat at apply) Stained Leave ic Fanada (B13 Aquatic Plants gen Sulfide Or ed Rhizosphe nce of Reduction Muck Surface (* Loc** M S=Coated Sand grains Indicators: Mineral (S1) eat or Peat I Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Pre Pes (B9) (B14) dor (C1) es on Living Roots d Iron (C4) on in Tilled Soil (C6) (C7)	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
HY Wetlan	(inches) 0-18 *Type: 0 Histosol (A1) Histic Epiped Black Histic (Indyrogen Sulfaction of the Surfaction of the Surfaction of the Surface Water Algal Mat or Color of the Surface Water Deposits Inundation Visionals	Color 10YR 5/2 C=Concentra con (A2) A3) fide (A4) ers (A5) 110) ow Dark Surfurface (A12) fobserved): Indicators: Primer (A1) able (A2) 3) (B1) cosits (B2) (B3) Crust (B4) (B5) sible on Aeria	% 95 ace (A11) Type: Depth (Inches): hary Indicators	10YR 5/6 on, RM=Redu X (check all th Water Aquat True A Hydro X Oxidiz Presse Recer Thin M Guaga	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyec Sandy Redox Stripped Matr Loamy Mucky Loamy Gleye Depleted Mat at apply) Stained Leave ic Fauna (B13) Aquatic Plants gen Sulfide Oc edd Rhizosphe ence of Reduce it Iron Reducti	* Loc** M S=Coated Sand grains Indicators: Mineral (S1) eat or Peat I Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Pre Pes (B9) (B14) dor (C1) es on Living Roots d Iron (C4) on in Tilled Soil (C6) (C7)	**Locati	on: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
HY Wetlan	(inches) 0-18 *Type: 0 Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belc Thick Dark St ictive Layer (if Remarks: *DROLOGY nd Hydrology Surface Wate High Water Tail Saturation (A) Water Mark Se Drift Deposits Algal Mat or 0 Iron Deposits	Color 10YR 5/2 C=Concentra on (A2) A3) fide (A4) ers (A5) 110) ow Dark Surfurface (A12) fobserved): Indicators: Prim or (A1) able (A2) 3) (B1) cosits (B2) (B3) Crust (B4) (B5) sible on Aeria etated Conca	% 95 ace (A11) Type: Depth (Inches): ary Indicators al Imagery (B7) ave Surface	10YR 5/6 on, RM=Redu X (check all th Water Aquat True / Hydro X Oxidiz Prese Recer Thin M Guage Other Yes	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyer Sandy Redox Stripped Matr Loamy Mucky Loamy Gleyer Depleted Mat at apply) Stained Leave ic Fanada (B13 Aquatic Plants gen Sulfide Or ed Rhizosphe nce of Reduction Muck Surface (* Loc** M S=Coated Sand grains ndicators: Mineral (S1) eat or Peat d Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Pre es (B9) (B14) dor (C1) res on Living Roots d Iron (C4) on in Tilled Soil (C6) C7) (D9) Depth (inches)	**Locati	nn: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
HY Wetlan	(inches) 0-18 *Type: (Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark So ictive Layer (if Remarks: *DROLOGY nd Hydrology Surface Wate High Water Ti Saturation (A Water Marks Sediment Dep Drift Deposits Algal Mat or Iron Deposits Inundation Vis Sparsely Veg	Color 10YR 5/2 C=Concentra con (A2) A3) fide (A4) ers (A5) 10) con (A2) A3 fide (A4) ers (A5) 10) con (A2) A3 fide (A4) ers (A5) 10) con (A2) A3 fobserved): Indicators: Primal (A1) able (A2) 3) (B1) cosits (B2) (B3) Crust (B4) (B5) sible on Aeria etated Conca	% 95 ace (A11) Type: Depth (Inches): nary Indicators al Imagery (B7) ave Surface ater Present? e Present?	10YR 5/6 Dn, RM=Redu Auster Aquat True A Hydro X Oxidiz Prese Recer Thin M Guage Other Yes Yes Yes X	ced Matrix, CS Hydric Soil I Sandy Mucky Sandy Gleyer Sandy Redox Stripped Matr Loamy Mucky Loamy Gleyer Depleted Mat at apply Stained Leavi ic Fauna (B13 Aquatic Plants gen Sulfide Oc ted Rhizosphe nce of Reduce to Iron Reducti Muck Surface (e or Well Data	* Loc** M S=Coated Sand grains Indicators: Mineral (S1) eat or Peat d Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Pre Pes (B9) (B14) Por (C1) Pes on Living Roots d Iron (C4) on in Tilled Soil (C6) (C7) (D9) Depth (inches) Depth (inches)	**Locati	non: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
HY Wetlan	(inches) 0-18 *Type: 0 Histosol (A1) Histic Epiped Black Histic (Hydrogen Sul Stratified Layer 2 cm Muck (A Depleted Belc Thick Dark St ictive Layer (if Remarks: *DROLOGY nd Hydrology Surface Wate High Water Tail Saturation (Aa Water Mark Se Drift Deposits Algal Mat or 0 Iron Deposits Inundation Vis Sparsely Veg Observations:	Color 10YR 5/2 C=Concentra C=	% 95 ace (A11) Type: Depth (Inches): hary Indicators al Imagery (B7) ave Surface ater Present? e Present? Present?	10YR 5/6 on, RM=Redu X (check all th Water Aquat True / Hydro X Oxidiz Prese Recer Thin M Guago Other Yes Yes Yes X Yes X	ced Matrix, CS Hydric Soil I Sandy Mucky 5cm Mucky P Sandy Gleyer Sandy Gleyer Sandy Gleyer Sandy Gleyer Loamy Mucky Loamy Gleyer Depleted Mat at apply) Stained Leave ic Fanad B13 Aquatic Plants gen Sulfide Oc ed Rhizosphe thron Reduction Muck Surface (e or Well Data No No No	* Loc** M S=Coated Sand grains ndicators: Mineral (S1) eat or Peat d Matrix (S4) (S5) ix (S6) Mineral (F1) d Matrix (F2) rix (F3) Hydric Soil Pre es (B9) (B14) dor (C1) res on Living Roots d Iron (C4) on in Tilled Soil (C6) C7) (D9) Depth (inches)	**Locati	nn: PL=Pore Lining, M=Matrix Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Indicators for Problematic Hydric Soils Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other Yes X No Secondary Indicators Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)

Site:		Lick 138kV Reb		City/County			Pike County		Date:		t 2023 Data Po	
Client:		can Electric Pow N. Houk, E. Holt		State: OF	<u> </u>	section,	Township, Rai	nge: .andform	Т	Sec erraces	19, T 5N, R 21V Local Relief	// Convex
1	Slope (%):	1-3 Lat.			Long			anuioiiii			NWI Class:	N/A
	ap Unit Name:	Omulga silt loan										
C		gic conditions typ		of year?	Y/N	Υ						
	Vegetation	, Soi	!	or H	lydrology	<u> </u>	significantly di					
Aro No	Vegetation	, Soi ances Present?	Ι <u></u> Υ	or H	ydrology No	/	naturally probl	lematic				
SUMM	IARY OF FIND	INGS	16	es X		-	-					
		phytic Vegetation	Present?	Yes	No	Х						
		Hydric Soi	I Present?	Yes X			-		Is the	DP within a	a Wetland?	
	W	etland Hydrology	/ Present?	Yes	No	Χ			Yes	No	X	
Remai		Does not meet	all wetland	d criteria								
VEGE	TATION			Absolute %	Don	ninant				I		
Tree S	tratum	Plot size: 30'		Cover		ecies	Indicat	tor Status	s			
1.				Covei	Spi	CCICS				Dom	ninance Test W	orksheet
2.			-		_						dominant specie	20
3.										that are OB	BL, FACW, or FA	AC: 0
4.										Total numb	er of dominant	2
5.					T-1-17		·			species aci	ross all strata:	
Shrub	Stratum_	Plot size: 15'	-	0	_Total (Jover					dominant specie BL, FACW, or FA	()()()
1.	Stratum	Flot size. 13									e Index Worksh	
2.							· ·				6 cover of:	
3.										OBL specie	es <u>0</u>	x 1 C
4.										FACW spe		x 2 C
5.					T-1-17					FAC specie		x 3 C
Horb S	Stratum	Plot size: 5'	=	0	Total (Jover				FACU specie		x 4 <u>380</u> x 5 25
1.	Schedonorus			60		Υ	FACI	П	4	Tota		x 5 <u>25</u>
	Lonicera japor			25		Ÿ	FACI		4		Prevalence	
3.	Cirsium arven			5		N	FACI		4	Hydrophyt	ic Vegetation Ir	ndicators:
4.	Ambrosia arte			5		N	FACI		4		d Test for Hydro	
5.	Lamium purpu	reum		5		N	UPL	-	5		inance Test is >	
6.							·				alence Index is	
7. 8.											hological Adapta lematic Hydroph	
0.				100	Total (Cover	· 					
Woody	Vine Stratum	Plot size: 15'	-		_ 10101	50101					ors of hydric soil	
1.										, ,	ogy must be pres	
2.											sturbed or proble	
	Domorlio.	1		0	Total (Cover					hytic Vegetatio	
SOIL	Remarks:									Yes	No	X
OOIL	Pro	file Description:	(Describe	to depth r	needed t	o docu	ment the indic	cator or	confirn	n absence o	of indicators.)	
	Depth	Matrix	(-			Red	ox Featu			<i>'</i>	
	(inches)	Color	%	Color	%	Type	* Loc**		Text		Remarks	
	0-4	10YR 5/2	100	40\/D 5/0					SiC			
	4-18	10YR 5/2	95	10YR 5/6	5	С	M		SiC	JL		
	*Type: C	=Concentration,	D=Depletion	n RM=Red	uced Ma	atrix CS	S=Coated Sand	drains	**Locat	tion: PI =Po	re Lining M=Ma	trix
	. , , , , ,			,			ndicators:	. g. ao			. cg,a	
	Histosol (A1)				Sandy	Mucky	Mineral (S1)				ox Dark Surface	
	Histic Epipedo				_5cm N	lucky P	eat or Peat				eted Dark Surface	
	Black Histic (A			-			Matrix (S4)				ox Depressions (
	Hydrogen Sulf Stratified Laye					Redox					s for Problemati st Prairie Redox	
	2 cm Muck (A			-			Mineral (F1)			Iron-l	Manganese Mas	sses (F12)
		w Dark Surface (A11)	-	Loamy	/ Gleye	d Matrix (F2)				Shallow Dark S	
	Thick Dark Su		,	X		ed Mat				Othe	r	. ,
Restri	ctive Layer (if	observed): Type								.,		
	Remarks:	Dept	th (Inches):				Hydric	Soil Pre	esent?	Yes	X No	
	DROLOGY											
	nd Hydrology	Indicators:										
		Primary I	ndicators	(check all t							ondary Indicato	rs
	Surface Water		.=		er Staine						il Cracks (B6)	
	High Water Ta		-	Aqua	atic Faun	na (B13)	(D44)				atterns (B10)	20)
	Saturation (A3 Water Marks (-	ا rue ا	Aquatic ogen Su	Plants	(B14) for (C1)		—	Dry-Seasor Crayfish Bu	n Water Table (C	, ∠)
	Sediment Dep		-				or (C1) es on Living R	oots	—	Saturation '	urrows (C8) Visible on Aerial	Imagery (Ca)
	Drift Deposits		-				d Iron (C4)				Stressed Plants	
	Algal Mat or C	rust (B4)	-				on in Tilled Soil	I (C6)			c Position (D2)	(=: ·)
	Iron Deposits	(B5) `´	-	Thin	Muck St	urface (C7)	` '			al Test (D5)	
	Inundation Vis	ible on Aerial Ima			ge or We	ell Data	(D9)				• •	
F:- 1 1 1		etated Concave S		Othe			D0-0					
rield (oservations:	Surface Water F Water Table Pre		Yes Yes	No No	X	Depth (in Depth (in		Hydro	logy Indica	tors Present?	
		Saturation Prese		res Yes	No	X	Depth (in		Julyano	Yes	No X	(
Descri	be Recorded D	ata (stream guag							ilable:		110	-
Remai	ks:						-					

Site:		Lick 138kV Rel		City/County:			ke County		Date:		t 2023 Data P	
Client		can Electric Pov N. Houk, E. Hol		State: OH	_ 56	ection, i	ownship, Ran	nge: andform	Ter	races	19, T 5N, R 21 Local Relief	Convex
	Slope (%):	1-3 Lat.			Long.						NWI Class:	N/A
		Omulga silt loa			\//N1							
C	imatic/nydrolog Vegetation	gic conditions typ , So	oicai for tim il	e or year? or Hv	Y/N drology	Ys	ignificantly dis	sturbed				
		, So	:i	or Hy	drology	n	aturally proble					
	ormal Circumsta	ances Present?	Y	es X	No							
SUMIN	MARY OF FIND	ings phytic Vegetatio	n Present?	Yes X	No							
	riyaro	Hydric So	il Present?	Yes X	No				Is the D	P within a	Wetland?	
_	. W	etland Hydrolog	y Present?	Yes X	No				Yes	X No		
Rema	rks: TATION	Meets all wetla	ind criteria	3								
		DI		Absolute %	Domi	nant		O				
<u>rree</u> S	Stratum_	Plot size: 30'		Cover	Spec	cies	Indicate	or Status	8			
1.											inance Test W	
2. 3.											dominant speci L, FACW, or F	7
4.				-						Total numb	er of dominant	2
5.											oss all strata:	
Shrub	Stratum	Plot size: 15'		0	Total Co	over					dominant speci L, FACW, or F	100.00
1.	Stratum	FIOI SIZE. 13									E Index Works	
2.										Total %	cover of:	
3.										OBL specie FACW spec		x 1 x 2
4. 5.				-						FAC specie		x 2 x 3
				0	Total Co	over			F	FACU spec	cies 0	x 4
	<u>Stratum</u> Leersia oryzoi	Plot size: 5'		70	Y	,	OBL		_	JPL specie Tota		x 5 <u>(</u>
1. 2.	Echinochloa c			20	- <u>'</u>		OBL FAC		3	TOla	Prevalence	
3.	Typha angusti			10	N		OBL			- - - - - - - - - - - - - - - - - - -	ic Vegetation I	
4.											d Test for Hydro	
5. 6.				-					+		inance Test is > alence Index is	
7.				-							hological Adapt	
8.				400	-							hytic Vegetation
Wood	v Vine Stratum	Plot size: 15'		100	Total Co	over					ors of hydric soi	
1.	y vine Stratum	1 10t 312e. <u>13</u>								•	gy must be pre	•
2.											sturbed or prob	
	Remarks:	ı		0	Total Co	over					hytic Vegetation	on Present?
SOIL												
		file Description Matri	: (Describ	e to depth ne	eded to	docum		ator or ox Featu		absence of	of indicators.)	
	Depth (inches)	Color	<u> </u>	Color	%	Type*		JX I Galu	Textu	ire	Remarks	
	0-2	10YR 4/2	100						SiC			
	2-18	10YR 4/2	95	7.5YR 4/6	5	С	M		SiC	L		
	*Type: C	=Concentration,	D=Depleti	on. RM=Redu	ced Matr	rix. CS=	Coated Sand	grains	**Location	on: PL=Por	re Linina. M=Ma	atrix
	•	,		•	Hydric	Soil Inc	dicators:	<u>U</u>			<u> </u>	
	_Histosol (A1) Histic Epipedo	n (A2)		-			lineral (S1) at or Peat		_		ox Dark Surface eted Dark Surfa	
	Black Histic (A				Sandy C	Sleved N	Matrix (S4)		_		ox Depressions	
	Hydrogen Sulf	ide (A4)			Sandy F	Redox (S	S5) ` ´		_	Indicators	for Problema	tic Hydric Soils
	Stratified Laye				Stripped				_		t Prairie Redox	
	2 cm Muck (A	w Dark Surface	(A11)	-	Loamy	viucky i Gleved	Mineral (F1) Matrix (F2)		_		Manganese Ma Shallow Dark S	
	Thick Dark Su	rface (A12)	` ,	X	Deplete				_	Othe		7411400 (1 12)
Restri	ictive Layer (if	observed): Type					He calculate	O - !! D	10		V 11	
	Remarks:	Дер	th (Inches)	:			Hydric	Soil Pre	sent?	Yes	X No	
HY	/DROLOGY											
Wetla	nd Hydrology		ll' 1	/-bb - II (b	-11					0		
	Surface Water		indicators	(check all the	Stained		(R9)				ondary Indicato il Cracks (B6)	ors
	High Water Ta	ıble (A2)		Aquati	ic Fauna	(B13)	` '			Drainage P	atterns (B10)	
	Saturation (A3				Aquatic P						Water Table (C2)
	Water Marks (Sediment Dep				gen Sulfi ed Rhizo		r (C1) s on Living Ro	oots	;	Saturation \	ırrows (C8) Visible on Aeria	al Imagery (C9)
	Drift Deposits			Prese	nce of Re	educed	Iron (C4)			Stunted or	Stressed Plants	s (D1)
	Algal Mat or C						in Tilled Soil	(C6)	X	Geomorphi	c Position (D2)	
	Iron Deposits	(B5) ible on Aerial Im	agery (R7)		fluck Sur or Well				<u> X</u> F	-AC-Neutra	al Test (D5)	
		etated Concave		Other		Daia (L						
Field		Surface Water	Present?	Yes	No	X	Depth (inc		11	and he all a se	lana Duc (2	
		Water Table Pr Saturation Pres		Yes Yes	No No	X X	Depth (inc Depth (inc	,	nyarolo	ogy Indicat Yes	tors Present? X No	
		ata (stream gua					us inspections	s), if avai	ilable:	163	20 110	
Rema	rks:											

		1-3	Power . Holt Lat.		City/County: State: OH	Lona	Section,	Pike County Township, R	Range: Landform	Te	Šec erraces	t 2023 Data Po 19, T 5N, R 21V Local Relief NWI Class:	
CI	limatic/hydrolog Vegetation Vegetation ormal Circumsta	ic condition	ns typical f _, Soil _, Soil	or time	of year? or Hy or Hy	Y/N /drology /drology No	Y 	significantly naturally pro					
	IARY OF FIND	NGS			·	_							
	Hydro	ohytic Vege	tation Pre ic Soil Pre			_No No	$\frac{X}{X}$			le the	DP within a	Wotland?	
	W	etland Hydi				No	$\frac{\lambda}{X}$			Yes	No No	X	
Remar		Does not	meet all w	etlanc	l criteria								
VEGE	TATION				Absolute %	Dor	ninant				l		
1. 2.				=	Cover	Sp	ecies	Indic	cator Statu	IS	Dom Number of	ninance Test Wo dominant specie	20
3. 4.				- -							that are OB Total numb	BL, FACW, or FA er of dominant	
5. Shrub	Stratum	Plot size:	15'	-	0	Total	Cover				Percent of	oss all strata: dominant specie L. FACW. or FA	s
1. 2.	Sambucus nig	ra		- -	3		N	F <i>F</i>	AC .	3	Prevalence	e Index Worksh cover of:	eet
3. 4. 5.				- - -							FACW species	cies <u>25</u> 3	x 2 <u>50</u> x 3 9
Herb S	Stratum Brickellia eupa	Plot size:	5'	-	3 35	Total	Cover	UI	PL	5	FACU specie UPL specie Tota	es <u>35</u>	
2.	Erigeron canad	densis		_	30		Ÿ	FA	CU	4		Prevalence I	ndex: 3.68
	Bidens frondos			_	25 5		Y N	FA0		2		ic Vegetation In	
4. 5.	Apocynum car Lycopus ameri			-	<u>5</u>		N		BL	<u>4</u> 1		d Test for Hydro inance Test is >	
6. 7. 8.				=							Preva Morp	alence Index is shological Adapta	<3.0* ations*
0.				-	100	Total	Cover	-				ors of hydric soil	
Woody 1. 2.	/ Vine Stratum	Plot size:	15'	-		_					hydrolo	gy must be pres sturbed or proble	ent, unless
				_	0	Total	Cover					hytic Vegetatio	
SOIL	Remarks:										Yes	No	X
OOIL	Prof			scribe	to depth no	eeded 1	to docu	ment the inc	dicator or	confirn	n absence o	of indicators.)	
	Depth		Matrix		Color	0/	Tuno		edox Featu		huro	Domorko	
	(inches) 0-18	Color 10YR 4/2	% 100		Color	%	Туре	* Loc**		Text		Remarks	
	*Type: C	=Concentra	ation, D=D	epletio	n, RM=Redu	iced Ma	atrix, CS	=Coated Sa	nd grains	**Locat	tion: PL=Poi	re Lining, M=Ma	trix
			·		•	Hydri	c Soil I	ndicators:					
	Histosol (A1) Histic Epipedo	n (A2)			-			Mineral (S1) eat or Peat				ox Dark Surface eted Dark Surface	
	Black Histic (A							Matrix (S4)				ox Depressions (
	Hydrogen Sulfi						Redox					for Problemati	
	Stratified Laye 2 cm Muck (A1						ed Matri	x (S6) Mineral (F1)	١			t Prairie Redox (Manganese Mas	
	Depleted Belov		face (A11)		-			d Matrix (F2)				Shallow Dark Su	
	Thick Dark Sur	rface (A12)	` ,				ted Matr				Othe	r	,
Restri	ctive Layer (if	observed):		ob oo\.				Llvde	io Soil Br	ocont?	Vaa	Na	v
F	Remarks:		Depth (In	cnes):				Hyar	ic Soil Pre	esent?	Yes	No	Х
HY	DROLOGY												
Wetla	nd Hydrology I			,						r			
	Surface Water		nary indic	ators (check all th		i y) ed Leave	s (B9)				ndary Indicato il Cracks (B6)	rs
	High Water Ta			=			na (B13)				Drainage P	atterns (B10)	
	Saturation (A3			_			Plants					n Water Table (C	2)
	Water Marks (I Sediment Dep			-			ılfide Od	or (C1) es on Living	Poots		Crayfish Bu	ırrows (C8) Visible on Aerial	Imageny (C9)
	Drift Deposits			=				d Iron (C4)	1,000			Stressed Plants	
	Algal Mat or C	rust (B4)		-	Recei	nt Iron I	Reduction	on in Tilled S	oil (C6)		Geomorphi	c Position (D2)	
	Iron Deposits (al Images	, (D7) =			urface (FAC-Neutra	al Test (D5)	
	Inundation Vising Sparsely Vege				Guag Other		ell Data	(D9)					
Field (Observations:	Surface W Water Tab	ater Prese le Present	nt? ?	Yes Yes	No No	X	Depth (Depth ((inches)	Hydro		tors Present?	,
Descri	be Recorded D	Saturation ata (stream			<u>Yes</u> ng well, aeria	No al photo	X os, previ	Depth (ailable:	Yes	No X	<u> </u>
Remar		,	3 0 - ,		<u> </u>			1	,,				

Site: Client: I	Ameri nvestigator(s):	/ Lick 138k\ can Electric N. Houk, E	Power	City/County: State: OH	Se	ection,	ke County Fownship, Range: Landform		Sec 1	2023 Data Point 19, T 5N, R 21W Local Relief	DP 32B Convex
	Slope (%):	1-3	Lat. 3	9.077774	Long.		-82.961085	Datum	NAD 83	NWI Class:	N/A
Soil Ma	ap Unit Name:	Omulga sil	t loam, 0 to 2 pe is typical for tim	ercent slopes	V/NI						
Ci	Vegetation	Jic condition	Soil	e or year? or Hy	Y/N drology	<u>Y</u> ,	significantly disturbed				
	Vegetation		, Soil	or Hy	drology	`r	naturally problematic				
Are No	ormal Circumsta	ances Prese	ent? Y	es X	No						
SUMM	IARY OF FIND		tation Present?	Voc	No						
	Hydro		c Soil Present?		No No	X		Is the I	DP within a	Wetland?	
	W	'etland Hydr	ology Present?	Yes	No	X		Yes	No	X	
Remar		Does not r	neet all wetlan	d criteria							
VEGE	TATION			Absolute %	Domi	nant		1			
Tree S	tratum_	Plot size:	30'	Cover	Spec		Indicator Status	S			
1.				00.0.	Opo				Domi	nance Test Work	sheet
2.										lominant species	1
3.					-				that are OBL	_, FACW, or FAC: er of dominant	-
4. 5.					-					oss all strata:	3
٠.				0	Total Co	over			Percent of d	ominant species	33.33
	Stratum_	Plot size:	15'							_, FACW, or FAC:	
1. 2.										Index Workshee cover of:	t
3.					-				OBL species	5 0 x	1 0
4.									FACW speci	ies 0 x :	2 0
5.					-				FAC species	30 x	
Harh S	Stratum_	Plot size:	5 '	0	Total Co	over			FACU species UPL species		
1.	Trifolium prate		3	30	Υ	,	FACU	4	Total		410
	Setaria pumila)		30	Y	<i>'</i>	FAC	3		Prevalence Ind	ex: 4.10
	Plantago lance			25	Y		UPL			Vegetation Indi	
	Datura stramo Daucus carota			<u>5</u>	N		UPL UPL	5 5		Test for Hydrophy nance Test is >50	
	Lamium purpu			5	N		UPL	5		lence Index is <3.	
7.	, ,								Morph	ological Adaptation	ns*
8.				100	Total C	21.05				ematic Hydrophytic	
Woody	Vine Stratum	Plot size	15'	100	Total Co	ovei				rs of hydric soil an	
1.	vine Stratam	1 100 3120.								y must be presen	
2.										turbed or problem	
	S	_		0	Total Co	over				nytic Vegetation I	
										Na v	
	Remarks:								Yes	No x	
SOIL	Prof			e to depth ne	eded to	docun	nent the indicator or				
	Prof Depth	l N	√atrix •				Redox Featu	res	absence of	f indicators.)	
	Prof Depth (inches)	Color	Matrix %	e to depth ne	eded to	docun	Redox Featu	res Text	absence of		
	Prof Depth	l N	√atrix •				Redox Featu	res	absence of	f indicators.)	
	Prof Depth (inches) 0-18	Color 10YR 5/2	Matrix % 100	Color	%	Type*	Redox Featu	res Text Sil	absence of	f indicators.) Remarks	
	Prof Depth (inches) 0-18	Color 10YR 5/2	Matrix % 100	Color	% ced Mati	Type*	Redox Featu Loc** -Coated Sand grains	res Text Sil	absence of	f indicators.) Remarks	
SOIL	Prof Depth (inches) 0-18	Color 10YR 5/2	Matrix % 100	Color	% ced Mate	Type* rix, CS=	Redox Featu Loc** -Coated Sand grains dicators:	res Text Sil	ure L	f indicators.) Remarks	
SOIL	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo	Color 10YR 5/2 =Concentra	Matrix % 100	Color	% ced Mate Hydric Sandy Modern	Type* rix, CS= Soil In Mucky Nacky Pe	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat	res Text Sil	ion: PL=Pore	Remarks E Lining, M=Matrix Dark Surface (F6 ted Dark Surface)	s) (F7)
SOIL	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A	Color 10YR 5/2 =Concentra	Matrix % 100	Color	% ced Mate Hydric Sandy Modern Mu Sandy (Type* rix, CS= Soil In Mucky Mucky Pe Gleyed	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4)	res Text Sil	n absence of ure Laboratoria ion: PL=Pore Redox Deplet Redox	f indicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8	5) FF7)
SOIL	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf	Color 10YR 5/2 =Concentra on (A2) (3) ide (A4)	Matrix % 100	Color	% ced Mate Hydric Sandy Modern Mu Sandy General Sandy Gene	Type* rix, CS= Soil In Mucky Mucky Pe Gleyed Redox (Redox Featu Loc** -Coated Sand grains dicators: dineral (S1) at or Peat Matrix (S4) S5)	res Text Sil	ion: PL=Pore Redox Deplet Redox Indicators	f indicators.) Remarks E Lining, M=Matrix O Dark Surface (Fe ted Dark Surface of Depressions (F8 for Problematic I	S) (F7) Hydric Soils
SOIL	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A	Color 10YR 5/2 =Concentra in (A2) 3) ide (A4) rs (A5)	Matrix % 100 ation, D=Depleti	Color	% ced Mate Hydric Sandy M Sandy G Sandy G Sandy G Sandy G Stripped Loamy	Type* rix, CS= Soil In Mucky N icky Pe Gleyed Redox (d Matrix Mucky I	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4) S5) (S6) Mineral (F1)	res Text Sil	n absence of ure L ion: PL=Pore Redox Deplet Redox Indicators to	f indicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8	5) F7) hydric Soils
SOIL	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A: Depleted Belo	Color 10YR 5/2 =Concentra in (A2) 3) ide (A4) irs (A5) 10) w Dark Surf	Matrix % 100 ation, D=Depleti	Color	ced Mate Hydric Sandy N Sandy (Sandy (Sandy (Sandy (Loamy Loamy	Type* rix, CS= Soil In Mucky Pe Gleyed Redox (d Matrix Mucky I Gleyed	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4) S5) (S6) Wineral (F1) Matrix (F2)	res Text Sil	n absence of ure ion: PL=Pore Redox Deplet Redox Indicators t Iron-M Very S	f indicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (A7 langanese Masse Shallow Dark Surfa	F7) Hydric Soils 6) s (F12)
SOIL	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su	Color 10YR 5/2 =Concentra in (A2) (A3) ide (A4) rrs (A5) 10) w Dark Surfrace (A12)	Matrix % 100 ation, D=Depleti	Color	% ced Mate Hydric Sandy M Sandy G Sandy G Sandy G Sandy G Stripped Loamy	Type* rix, CS= Soil In Mucky Pe Gleyed Redox (d Matrix Mucky I Gleyed	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4) S5) (S6) Wineral (F1) Matrix (F2)	res Text Sil	n absence of ure L ion: PL=Pore Redox Deplet Redox Indicators of Coast Iron-M	f indicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (A7 langanese Masse Shallow Dark Surfa	F7) Hydric Soils 6) s (F12)
SOIL	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A: Depleted Belo	Color 10YR 5/2 =Concentra in (A2) (A3) ide (A4) rrs (A5) 10) w Dark Surfrace (A12)	Matrix % 100 Ition, D=Depleti ace (A11) Type:	Color on, RM=Redu	ced Mate Hydric Sandy N Sandy (Sandy (Sandy (Sandy (Loamy Loamy	Type* rix, CS= Soil In Mucky Pe Gleyed Redox (d Matrix Mucky I Gleyed	Redox Featu Loc** -Coated Sand grains dicators: dineral (S1) at or Peat Matrix (S4) S5) (S6) Wineral (F1) Matrix (F2) x (F3)	res Text Sil	n absence of ure ion: PL=Pore Redox Deplet Redox Indicators f Coast Iron-M Very S Other	Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface (Depressions (F8 for Problematic Prairie Redox (A1 danganese Masse Shallow Dark Surface)	6) Hydric Soils 6) s (F12) ace (F12)
Restric	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su ctive Layer (if	Color 10YR 5/2 =Concentra in (A2) (A3) ide (A4) rrs (A5) 10) w Dark Surfrace (A12)	Matrix % 100 ation, D=Depleti	Color on, RM=Redu	ced Mate Hydric Sandy N Sandy (Sandy (Sandy (Sandy (Loamy Loamy	Type* rix, CS= Soil In Mucky Pe Gleyed Redox (d Matrix Mucky I Gleyed	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4) S5) (S6) Wineral (F1) Matrix (F2)	res Text Sil	n absence of ure ion: PL=Pore Redox Deplet Redox Indicators t Iron-M Very S	f indicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (A7 langanese Masse Shallow Dark Surfa	6) Hydric Soils 6) s (F12) ace (F12)
Restric	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY	Color 10YR 5/2 =Concentra In (A2) ide (A4) irs (A5) 10) w Dark Surfrface (A12) observed):	Matrix % 100 Ition, D=Depleti ace (A11) Type:	Color on, RM=Redu	ced Mate Hydric Sandy N Sandy (Sandy (Sandy (Sandy (Loamy Loamy	Type* rix, CS= Soil In Mucky Pe Gleyed Redox (d Matrix Mucky I Gleyed	Redox Featu Loc** -Coated Sand grains dicators: dineral (S1) at or Peat Matrix (S4) S5) (S6) Wineral (F1) Matrix (F2) x (F3)	res Text Sil	n absence of ure ion: PL=Pore Redox Deplet Redox Indicators f Coast Iron-M Very S Other	Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface (Depressions (F8 for Problematic Prairie Redox (A1 danganese Masse Shallow Dark Surface)	6) Hydric Soils 6) s (F12) ace (F12)
Restric	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su ctive Layer (if	Color 10YR 5/2 =Concentra in (A2) (A3) (A5) (A5) (B) (B) (B) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C	Matrix % 100 Ition, D=Depleti Face (A11) Type: Depth (Inches)	Color on, RM=Redu	% ced Mate Hydric Sandy M Sandy F Stripped Loamy Loamy Deplete	Type* rix, CS= Soil In Mucky N cky Pe Gleyed Redox (d Matrix Mucky I Gleyed d Matrix	Redox Featu Loc** -Coated Sand grains dicators: dineral (S1) at or Peat Matrix (S4) S5) (S6) Wineral (F1) Matrix (F2) x (F3)	res Text Sil	n absence of ure ion: PL=Pore Redox Deplet Redox Indicators t Coast Iron-M Very S Other Yes	Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (A1 langanese Masse Shallow Dark Surfa	6) Hydric Soils 6) s (F12) ace (F12)
Restric F HY Wetlar	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY Ind Hydrology I	Color 10YR 5/2 =Concentra in (A2) 3) ide (A4) irs (A5) 10) w Dark Surfrface (A12) observed): Indicators: Prim (A1)	Matrix % 100 Ition, D=Depleti ace (A11) Type:	Color on, RM=Redu (check all the Water	% ced Mati Hydric Sandy M Sandy G Sandy F Stripped Loamy Loamy Deplete at apply Stained	Type* rix, CS= Soil In Mucky N Gleyed d Matrix Mucky I Gleyed d Matrix	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Hydric Soil Pre	res Text Sil **Locat	n absence of ure ion: PL=Pore Redox Deplete Redox Indicators for Coast Iron-M Very S Other Yes Secon	f indicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (A1 danganese Masse Shallow Dark Surface) No X	6) Hydric Soils 6) s (F12) ace (F12)
Restric F HY Wetlar	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY nd Hydrology I Surface Water High Water Ta	Color 10YR 5/2 =Concentra in (A2) 3) ide (A4) irs (A5) 10) w Dark Surfrace (A12) observed): Indicators: Prim (A1) ible (A2)	Matrix % 100 Ition, D=Depleti Face (A11) Type: Depth (Inches)	Color on, RM=Redu (check all the Water Aquati	% ced Matr Hydric Sandy M 5cm Mu Sandy G Sandy G Stripped Loamy Loamy Deplete at apply Stained c Fauna	Type* rix, CS= Soil In Mucky N licky Pe Sileyed Redox (d Matrix Mucky I Gleyed d Matrix Leaves (B13)	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Hydric Soil Pre	res Text Sil **Locat	n absence of ure L ion: PL=Pore Redox Deplet Redox Indicators t Coast Iron-M Very S Other Yes Secor Surface Soil Drainage Pa	Findicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface (Depressions (F8 for Problematic I Prairie Redox (Ar langanese Masse Shallow Dark Surfa No X Indary Indicators Cracks (B6) atterns (B10)	6) Hydric Soils 6) s (F12) ace (F12)
Restric F HY Wetlar	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A: Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY IN Hydrology Surface Water High Water Ta Saturation (A3	Color 10YR 5/2 =Concentra in (A2) 3) ide (A4) rs (A5) 10) w Dark Surfrface (A12) observed): Indicators: Prin (A1) bble (A2)	Matrix % 100 Ition, D=Depleti Face (A11) Type: Depth (Inches)	Color On, RM=Redu (check all the Water Aquati	% ced Mati Hydric Sandy M 5cm Mu Sandy G Sandy G Stripped Loamy Loamy Deplete at apply at apply at apply at apply c Fauna quatic F	Type* rix, CS= Soil In Mucky M licky Pe Sleyed Redox (d Matrix Mucky I Gleyed d Matrix Leaves (B13) Plants (B	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Hydric Soil Pre	res Text Sil **Locat	n absence of ure ure lion: PL=Pore Redox Deplete Redox Indicators t Coast Iron-M Very S Other Yes Secor Surface Soil Drainage Pa Dry-Season	f indicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (A7 langanese Masse Shallow Dark Surfa No X Indary Indicators Cracks (B6) tterns (B10) Water Table (C2)	6) Hydric Soils 6) s (F12) ace (F12)
Restric F HY Wetlar	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY nd Hydrology I Surface Water High Water Ta	Color 10YR 5/2 =Concentra In (A2) 3) ide (A4) rs (A5) 10) w Dark Surfrface (A12) observed): Indicators: Prim (A1) able (A2) b) B1)	Matrix % 100 Ition, D=Depleti Face (A11) Type: Depth (Inches)	Color on, RM=Redu (check all th Water Aquati True A Hydro	% ced Mati Hydric Sandy N 5cm Mu Sandy C Sandy F Stripped Loamy Loamy Deplete at apply Stained c Fauna quatic F gen Sulf	Type* rix, CS= Soil In Mucky N Icky Pe Redox (I Mucky I Gleyed (I Mucky I Mucky	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Hydric Soil Pre	res Text Sil **Locat	n absence of ure ure lion: PL=Pore Redox Deplet Redox Indicators t Coast Iron-M Very S Other Yes Secor Surface Soila Drainage Pa Dry-Season Crayfish Bur	f indicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (A7 langanese Masse Shallow Dark Surfa No X Indary Indicators Cracks (B6) tterns (B10) Water Table (C2)	s) F7) Hydric Soils 6) s (F12) ace (F12)
Restrio F HY Wetlar	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY nd Hydrology Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits	Color 10YR 5/2 =Concentra in (A2) 3) ide (A4) irs (A5) 10) w Dark Surfrace (A12) observed): Indicators: Prim (A1) ible (A2)) B1) osits (B2) (B3)	Matrix % 100 Ition, D=Depleti Face (A11) Type: Depth (Inches)	Color On, RM=Redu (check all th Water Aquati True A Hydro Oxidiz Presei	% ced Mati Hydric Sandy M Sandy F Stripped Loamy Loamy Deplete at apply Stained c Fauna quatic F gen Sulf ed Rhizz nce of R	Type* rix, CS= Soil In Mucky N Gleyed d Matrix Mucky I Gleyed d Matrix Leaves (B13) Plants (I dide Oddosphere educed	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4) S5) (S6) Wineral (F1) Matrix (F2) x (F3) Hydric Soil Pre	res Text Sil **Locat	n absence of ure L ion: PL=Pore Redox Deplet Redox Indicators f Coast Iron-M Very S Other Yes Secor Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S	f indicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (A1 langanese Masse Shallow Dark Surfa No X Indary Indicators Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) Sisible on Aerial Im Stressed Plants (D	s) F7) Hydric Soils 6) s (F12) ace (F12)
Restrio F HY Wetlar	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY nd Hydrology Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C	Color 10YR 5/2 =Concentra in (A2) 3) ide (A4) irs (A5) 10) w Dark Surfrface (A12) observed): Indicators: Prim (A1) ible (A2)) B1) oosits (B2) (B3) rust (B4)	Matrix % 100 Ition, D=Depleti Face (A11) Type: Depth (Inches)	Color On, RM=Redu (check all the Water Aquati True A Hydroo Oxidiz Presee Recen	% ced Mati Hydric Sandy M Sandy F Stripped Loamy Loamy Deplete at apply Stained c Fauna quatic F gen Sulf ed Rhizc nce of R t Iron Re	Type* rix, CS= Soil In Mucky N Gleyed d Matrix Mucky I Gleyed d Matrix Leaves (B13) Plants (I ide Odd osphered eduction	Redox Featu Loc**	res Text Sil **Locat	Redox Deplete Redox Indicators of Coast Iron-M Very S Other Yes Secor Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Findicators.) Remarks Example Lining, M=Matrix Control Dark Surface (Fetted Dark Surface) Control Dark Surface (And Dark Surface) Control Dark Surface) No X Indary Indicators Cracks (B6) Cracks (B10) Water Table (C2) Crows (C8) Crows (C8) Crows (C8) Crows (C8) Crows (D2) Crows (D2)	s) F7) Hydric Soils 6) s (F12) ace (F12)
Restric F HY Wetlar	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A: Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY Id Hydrology Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	Color 10YR 5/2 =Concentra n (A2) 3) ide (A4) rs (A5) 10) w Dark Surf rface (A12) observed): Prim (A1) ble (A2)) B1) osits (B2) (B3) rust (B4) (B5)	Matrix % 100 Attion, D=Depleti face (A11) Type: Depth (Inches)	Color On, RM=Redu (check all the Water Aquati True A Hydro Oxidiz Presee Recer Thin M	% ced Mati Hydric Sandy M 5cm Mu Sandy G Stripped Loamy Loamy Deplete at apply Stained c Fauna quatic F gen Sulf ed Rhizo nce of R t Iron Re fluck Sur	rix, CS= Soil In Mucky Ne Gleyed Redox (d Matrix Mucky I Gleyed d Matrix Plants (ide Odd osphere educed eduction	Redox Featu Loc**	res Text Sil **Locat	n absence of ure L ion: PL=Pore Redox Deplet Redox Indicators f Coast Iron-M Very S Other Yes Secor Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S	Findicators.) Remarks Example Lining, M=Matrix Control Dark Surface (Fetted Dark Surface) Control Dark Surface (And Dark Surface) Control Dark Surface) No X Indary Indicators Cracks (B6) Cracks (B10) Water Table (C2) Crows (C8) Crows (C8) Crows (C8) Crows (C8) Crows (D2) Crows (D2)	s) F7) Hydric Soils 6) s (F12) ace (F12)
Restrice F HY Wetlar	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A: Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY Id Hydrology Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	Color 10YR 5/2 =Concentra n (A2) 3) ide (A4) rs (A5) 10) w Dark Surfrface (A12) observed): Indicators: Prin (A1) bble (A2)) B1) osits (B2) (B3) rust (B4) (B5) ible on Aeria	Matrix % 100 Attion, D=Depleti face (A11) Type: Depth (Inches) mary Indicators	Color On, RM=Redu (check all the Water Aquati True A Hydro Oxidiz Presee Recer Thin M	% ced Mati Hydric Sandy M Sandy F Stripped Loamy Loamy Deplete at apply Stained c Fauna quatic F gen Sulf ed Rhizc nce of R t Iron Re	rix, CS= Soil In Mucky Ne Gleyed Redox (d Matrix Mucky I Gleyed d Matrix Plants (ide Odd osphere educed eduction	Redox Featu Loc**	res Text Sil **Locat	Redox Deplete Redox Indicators of Coast Iron-M Very S Other Yes Secor Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	Findicators.) Remarks Example Lining, M=Matrix Control Dark Surface (Fetted Dark Surface) Control Dark Surface (And Dark Surface) Control Dark Surface) No X Indary Indicators Cracks (B6) Cracks (B10) Water Table (C2) Crows (C8) Crows (C8) Crows (C8) Crows (C8) Crows (D2) Crows (D2)	s) F7) Hydric Soils 6) s (F12) ace (F12)
Restric	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY d Hydrology Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Vis	Color 10YR 5/2 =Concentra in (A2) (A3) ide (A4) irs (A5) (A5) (A5) (A7) ide (A12) observed): Indicators: Prin (A1) ible (A2) (B3) rust (B4) (B5) ive (B4) (B5) Surface William Surface William Surface William Color (A1) Color (A2) Color (A3) C	Matrix % 100 ace (A11) Type: Depth (Inches) mary Indicators al Imagery (B7) ave Surface ater Present?	Color On, RM=Redu Check all th Water Aquati True A Hydro Oxidiz Prese Recer Thin M Guage Other	% ced Mati Hydric Sandy N Sandy N Sandy F Stripped Loamy Loamy Deplete at apply Stained c Fauna quatic F gen Sulf ed Rhiz nce of R t Iron Re fuck Sur e or Well No	Type* rix, CS= Soil In Mucky N Gleyed A Matrix Mucky I Gleyed d Matrix Leaves (B13) Plants (I ide Odo osphere educed eduction face (C Data (I	Redox Featu Loc** -Coated Sand grains dicators: dineral (S1) at or Peat Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Hydric Soil Pre	res Text Sil **Locat	Redox Deplet Redox Indicators for Coast Iron-M Very S Other Yes Secor Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	Findicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (Af danganese Masse Shallow Dark Surfa No X No X Indary Indicators Cracks (B6) Itterns (B10) Water Table (C2) Trows (C8) Cisible on Aerial Im Stressed Plants (D E Position (D2) I Test (D5)	s) F7) Hydric Soils 6) s (F12) ace (F12)
Restric	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A· Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY nd Hydrology Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Sparsely Vege	Color 10YR 5/2 =Concentra in (A2) 3) ide (A4) irs (A5) 10) w Dark Surfrace (A12) observed): Indicators: Print (A1) ible (A2)) B1) osits (B2) (B3) rust (B4) (B5) ible on Aeria etated Conce	Matrix % 100 tion, D=Depleti ace (A11) Type: Depth (Inches) mary Indicators al Imagery (B7) ave Surface ater Present? le Present?	Color On, RM=Redu Check all th Water Aquati True A Hydro Oxidiz Presei Recen Thin M Guage Other Yes Yes	% ced Mati Hydric Sandy N Sandy N Sandy S Stripped Loamy Loamy Deplete at apply Stained c Fauna quatic F gen Sulf ed Rhizz nce of R I Iron Re fluck Sur e or Well No	Type* rix, CS= Soil In Mucky N Gleyed d Matrix Mucky I Gleyed d Matrix CBH3) Plants (I Gde Odd	Redox Featu Loc** -Coated Sand grains dicators: dineral (S1) at or Peat Matrix (S4) S5) (S6) Wineral (F1) Matrix (F2) x (F3) Hydric Soil Pre	res Text Sil **Locat	rabsence of ure L Ion: PL=Pore Redox Deplet Redox Indicators of Coast Iron-M Very S Other Yes Secor Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	Findicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (A1 danganese Masse Shallow Dark Surfa No X No X Indary Indicators Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) disible on Aerial Imatersed Plants (D2) I Test (D5) Drs Present?	s) F7) Hydric Soils 6) s (F12) ace (F12)
Restrice F HY Wetlar	Prof Depth (inches) 0-18 *Type: C Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A: Depleted Belo Thick Dark Su ctive Layer (if Remarks: DROLOGY Id Hydrology Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Sparsely Vege Dbservations:	Color 10YR 5/2 =Concentra In (A2) 3) ide (A4) In (A5) In (A2) In (A5) In (A5) In (A5) In (A6) In (A6	Matrix % 100 tion, D=Depleti face (A11) Type: Depth (Inches) mary Indicators al Imagery (B7) ave Surface ater Present? le Present? Present?	Color On, RM=Redu Check all the Water Aquati True A Hydro Oxidiz Presee Recen Thin M Guage Other Yes Yes Yes	% ced Matr Hydric Sandy M 5cm Mu Sandy G Sandy F Stripped Loamy Loamy Deplete at apply Stained c Fauna quatic F gen Sulf ed Rhizo nce of R fuck Sur e or Well No No	rix, CS= Soil In Mucky Pe Gleyed Redox (d Matrix Mucky I Gleyed d Matrix Plants (I de Odd eduction face (C Data (I X X X X	Redox Featu Loc** -Coated Sand grains dicators: dineral (S1) at or Peat Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Hydric Soil Pre	res Text Sil **Locat **Besent?	Redox Deplet Redox Indicators for Coast Iron-M Very S Other Yes Secor Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	Findicators.) Remarks E Lining, M=Matrix C Dark Surface (F6 ted Dark Surface) C Depressions (F8 for Problematic I Prairie Redox (Af danganese Masse Shallow Dark Surfa No X No X Indary Indicators Cracks (B6) Itterns (B10) Water Table (C2) Trows (C8) Cisible on Aerial Im Stressed Plants (D E Position (D2) I Test (D5)	s) F7) Hydric Soils 6) s (F12) ace (F12)

Site: Client		y Lick 138k\ ican Electric		City/County: State: OH			Pike County , Township, Range:	Date:	29 Au	ugust 2	2023 Data Po 9, T 5N, R 21V	int: <u>C</u>	OP 32C
	Investigator(s):	N. Houk. E			_		Landform		erraces		Local Relief	Con	/ex
Sail M	Slope (%):	1-3	Lat.	39.075902 percent slopes	Long.		-82.960614	Datum	NAD	83	NWI Class:	N/A	Ą
C	limatic/hydrolo	gic condition	ns typical for t	ime of vear?	Y/N	Υ							
	Vegetation	ĺ	, Soil	or Hy	drology		significantly disturbed						
Δro N	Vegetation ormal Circumst	ances Pres	_, Soil ent?	Yes X	drology No		naturally problematic						
	MARY OF FIND	INGS		-	_ 110	-	_						
	Hydro		etation Presen ic Soil Presen		_No No	X	=	le the	DD with	hin a l	Wetland?		
		/etland Hyd	rology Presen	t? Yes	No	$\frac{X}{X}$	=	Yes		No No	X		
Rema	rks: TATION	Does not	meet all wetla	and criteria									
		DI	001	Absolute %	Dom	ninant	la d'a atan Otata	_					
	Stratum_	Plot size:	30.	Cover	Spe	ecies	Indicator Statu	S		_			
1. 2.							<u> </u>		Numbe	Domii	nance Test Wo ominant specie	orkshee s	
3.				-	-		_						0
4.							-				, FACW, or FA r of dominant		3
5.	-			0	Total C	OVE			specie: Percer	s acro	ss all strata: ominant specie	s —	
Shrub	Stratum	Plot size:	15'		_ rotar c	JOVCI					, FACW, or FA		0.00
1.							_				Index Worksh	eet	
2. 3.				-			-		OBL sr		cover <u>of:</u> 0 >	, ₁ —	0
4.							_		FACW	speci	es 0	(2	0
5.					Total C	over	_		FAC sp FACU				30 180
Herb S	Stratum	Plot size:	5'		_ I Olai C	ovei			UPL sp				225
1.	Poa pratensis	:		30		Y	FACU	4		Total	100		435
2. 3.	Lamium purpu Plantago lanc			20		Υ Υ	UPL UPL	<u>5</u> 5	Hydro	nhvtic	Prevalence In Vegetation In		4.35
4.	Dipsacus fullo			10		N .	FACU	4			Test for Hydron		
5.	Setaria pumila			10		N	FAC	3			ance Test is >5		_
6. 7.	Daucus carota Trifolium prate			<u> 5</u> 5		N N	UPL FACU	<u>5</u> 4			ence Index is ≤ ological Adapta		
8.	Till Ollarit prace	<i>31100</i>					17.00	-			matic Hydrophy		etation*
ام ۱	\/:n n Ctmat	Dist size.	4.51	100	Total C	Cover			*Ind	licator	s of hydric soil	and wet	land
1.	y Vine Stratum	Plot size:	15						hyd	_	y must be pres		ess
2.											urbed or proble		_
	Remarks:			0	Total C	Cover				droph Yes	ytic Vegetatio No	n Prese x	ent?
SOIL													
	Pro		otion: (Descr Matrix	ibe to depth ne	eded to	o docı	iment the indicator or Redox Featu		n abser	nce of	indicators.)		
	Depth (inches)	Color	%	Color	%	Туре	e* Loc**	Text	ture		Remarks		
	0-18	10YR 5/2				71		Si					
	*Type: C	C=Concentra	ation, D=Deple	etion, RM=Redu	iced Ma	trix, CS	S=Coated Sand grains	**Loca	tion: PL	=Pore	Lining, M=Mat	rix	
	Histosol (A1)				Hydrid	Soil I	Indicators: Mineral (S1)			Dodov	Dark Surface (T6\	
	Histic Epipedo	on (A2)			5cm M	ucky P	Peat or Peat				ed Dark Surface		
	Black Histic (A	\3) [`]			Sandy	Gleye	d Matrix (S4)				Depressions (I		
	Hydrogen Sullastratified Lave				Sandy Strippe						or Problemati Prairie Redox (c Soils
	2 cm Muck (A	10)`			Loamy	Mucky	y Mineral (F1)		I	ron-M	anganese Mas	ses (F12	
	Depleted Belo Thick Dark Su						d Matrix (F2) rix (F3)				shallow Dark Su	ırface (F	- 12)
Restr	ictive Layer (if				Depleti	eu iviai	iix (F3)			Other			
			Depth (Inche	s):			Hydric Soil Pre	esent?	,	Yes	No	Χ	
	Remarks: /DROLOGY												
	nd Hydrology												
	0	Prin	nary Indicato	rs (check all th	at appl	y)	(DO)				ndary Indicator	'S	
	Surface Wate High Water Ta				r Staine ic Faun						Cracks (B6) tterns (B10)		
	Saturation (A3	3) `´´		True /	Aquatic	Plants	(B14)		Dry-Se	ason '	Water Table (C	2)	
	Water Marks (Sediment Der						dor (C1)				rows (C8) isible on Aerial	lmaga=	, (CO)
	_Sediment Dep Drift Deposits						res on Living Roots ed Iron (C4)				tressed Plants		y (UB)
	Algal Mat or C	rust (B4)		Recer	nt Iron R	Reducti	on in Tilled Soil (C6)		Geomo	orphic	Position (D2)	` '/	
	Iron Deposits Inundation Vis		ial Imagen, (D		Muck Su				FAC-N	eutral	Test (D5)		
	Sparsely Vege			(1)Guage Other	e or We	ıı Data	(80)						
Field	Observations:	Surface W	ater Present?	Yes	No	X	Depth (inches)				D 15		
		Water Tab Saturation	le Present?	Yes Yes	No No	X	Depth (inches) Depth (inches)	Hydro		dicato Yes	ors Present? No X		
							rious inspections), if ava	ilable:			.10 X		
Rema	rks:												

Site: Client:		Lick 138kV can Electric		City/County: State: OH	S	P ection,	Township, Range:	-	Sec 1	2023 Data Point 9, T 5N, R 21W	:: <u>DP 32D</u>
ı	nvestigator(s): Slope (%):	N. Houk, E.		39.075292			Landform -82.959353			_ocal Relief	Convex N/A
Soil Ma	ap Unit Name:	1-3 Omulga silt			_Long.		-02.909303	Datum	NAD 83	NVVI Class.	IN/A
CI	imatic/hydrolog	ic condition	s typical for tim	ne of year?	Y/N	Υ					
	Vegetation		, Soil	or Hy	drology		significantly disturbed				
Are No	Vegetation ormal Circumsta	nces Prese	, Soli ent? Y	es X	drology No		naturally problematic				
SUMM	IARY OF FINDI	NGS									
	Hydrop		tation Present?		No	X		1- 41	DD!!!-! 1	N - 41 10	
	We		c Soil Present? ology Present?		No No	X		Yes	DP within a V No	vetiand? X	
Remar	ks:		neet all wetlan		110						
VEGE.	TATION			Absolute 0/	Dom	inant		1	1		
Tree S	tratum	Plot size:	30'	Absolute % Cover		inant cies	Indicator Status	S			
1.	Acer rubrum	-		5		N	FAC	3	Domir	nance Test Worl	ksheet
2.										minant species	0
3. 4.									that are OBL	, FACW, or FAC: of dominant	
4. 5.					-	 >			species acros		4
				5	Total C	over			Percent of do	minant species	0.00
	<u>Stratum</u> Rosa multiflora	Plot size:	15'	30	,	Y	FACU	4		, FACW, or FAC:	
1. 2.	Rubus occiden			15		Y	UPL	5	Total %	ndex Workshee	et.
	Ribes cynosba			5		N	FACU	4	OBL species	5 x	1 5
4.									FACW specie		
5.				50	Total C	over			FAC species FACU species		
Herb S		Plot size:			- rotal C				UPL species		
1.	Schedonorus a		IS	30		Y	FACU	4	Total	140	540
	Solidago canad Symphyotrichu		<u></u>	20 15		N .	FACU FACU	4	Hydrophytic	Prevalence Ind Vegetation Indi	
	Calystegia sep		<u>'</u>	5		i	FAC	3		Test for Hydroph	
5.	Oxalis cornicul			5		N	FACU	4	Domin	ance Test is >50	%
6. 7.	Lycopus ameri Onoclea sensil			<u>5</u> 5		N N	OBL FACW	2		ence Index is ≤3.	
7. 8.	Oriociea serisii	OIIIS				N	FACW			ological Adaptatio matic Hydrophyti	
				85	Total C	over				s of hydric soil ar	
	Vine Stratum	Plot size:	15'							y must be preser	
1. 2.										urbed or problem	
				0	Total C	over				ytic Vegetation	Present?
SOIL	Remarks:								Yes	No >	(
JUIL	Prof	ile Descrip	tion: (Describ	e to depth ne	eded to	docur	ment the indicator or	confirn	n absence of	indicators.)	
	Depth	N	/latrix	•			Redox Featu	res		ĺ	
	(inches) 0-18	Color 10YR 5/2	% 100	Color	%	Type*	Loc**	Text Si		Remarks	
	0-16	1011 3/2	100					- Oi	_		
	*Type: C:	=Concentra	tion, D=Depleti	on, RM=Redu	ced Ma	trix, CS:	=Coated Sand grains	**Locat	tion: PL=Pore	Lining, M=Matrix	(
	Histosol (A1)						Mineral (S1)		Redox	Dark Surface (Fo	6)
	Histic Epipedor	n (A2)			5cm M	ucky Ée	eat or Peat [′]			ed Dark Surface	
	Black Histic (A Hydrogen Sulfi					Gleyed Redox	Matrix (S4)			Depressions (F8	
	Stratified Layer					d Matrix				or Problematic l Prairie Redox (A	
	2 cm Muck (A1	0)` ´			Loamy	Mucky	Mineral (F1)		Iron-Ma	anganese Masse	s (F12)
	Depleted Belov		ace (A11)				Matrix (F2)			hallow Dark Surf	ace (F12)
Restri	Thick Dark Sur		Tyne:		Deplete	ed Matri	IX (F3)		Other		
i (Coti i	ctive Layer (ii v		Depth (Inches)	:			Hydric Soil Pre	esent?	Yes	No >	(
	Remarks:										
	DROLOGY nd Hydrology I	ndicators:									
motiu		Prim	ary Indicators	(check all th	at apply	/)				dary Indicators	
	Surface Water				Staine				Surface Soil		
	High Water Tal Saturation (A3)				ic Faun: Aquatic				Dry-Season \	terns (B10) Nater Table (C2)	
	Water Marks (F			Hydro	gen Sul	fide Od	or (C1)		Crayfish Burr		•
	Sediment Depo						es on Living Roots			sible on Aerial Im	
	Drift Deposits (Algal Mat or Cr						d Iron (C4) on in Tilled Soil (C6)		Stunted or St Geomorphic	ressed Plants (D	01)
	Iron Deposits (ու ուսու ռ ∕luck Տս				FAC-Neutral		
	Inundation Visi		al Imagery (B7)		e or We					· - · \ /	
Field 4	Sparsely Veget	tated Conca	ave Surface /	Other			Donth (inches)				
Field (Sparsely Veger Observations:	tated Conca Surface Wa	ave Surface ater Present?	Other	No	X	Depth (inches) Depth (inches)	Hvdro	logy Indicato	rs Present?	
	Sparsely Veger Observations:	tated Conca Surface Wa Water Tabl Saturation	ave Surface ater Present? e Present? Present?	Yes Yes Yes Yes	No No No	X X	Depth (inches) Depth (inches)		logy Indicato Yes	rs Present? No X	
	Sparsely Veger Dbservations: be Recorded Da	tated Conca Surface Wa Water Tabl Saturation	ave Surface ater Present? e Present? Present?	Yes Yes Yes Yes	No No No	X X	Depth (inches)		•		

Site: Client:	Americ Investigator(s):	Lick 138kV can Electric N. Houk, E	Power	City/County: State: OH	S	Pi ection, T	ke County Fownship, Range: Landform			Г <u>5</u> N, R 21W	DP 32E Convex
	Slope (%):	1-3	Lat. 3	9.075265	Long.		-82.957308		NAD 83 NW	/I Class:	N/A
Soil Ma	ap Unit Name: limatic/hydrologi	Omulga silt	t loam, 0 to 2 pe	ercent slopes	Y/N	Υ					
O	Vegetation	ic condition	. Soil		drology		significantly disturbed				
	Vegetation		, Soil	or Hy	drology	r	naturally problematic				
Are No	ormal Circumsta	nces Prese	ent? Y	es X	No						
SUIVIN	IARY OF FINDI		tation Present?	Yes	No	Х					
	Tiyalop		c Soil Present?		No	$\frac{X}{X}$		Is the I	DP within a Wet	land?	
			ology Present?		No	X		Yes	No X		
Remar	rks: TATION	Does not r	neet all wetlan	d criteria							
				Absolute %	Dom	inant		1			
Tree S	Stratum_	Plot size:	30'	Cover	Spe		Indicator Status	S			
1.	Acer negundo			15	.)	1	FAC	3		ce Test Works	heet
2.	Carya ovata			10		<u> </u>	FACU	4	Number of domi		1
3. 4.									that are OBL, FATotal number of	ACW, or FAC: dominant	
5.				-					species across a	all strata:	5
	_			25	Total C	over			Percent of domin	nant species	20.00
	Stratum Elaeagnus umb	Plot size:	15'	30	,	(UPL		that are OBL, FA		
	Ligustrum vulga			20		/	FACU	5 4	Total % cov		
3.						·	17100		OBL species	0 x 1	0
4.									FACW species	10 x 2	20
5.				50	Total C	over			FAC species FACU species	40 x 3 75 x 4	120 300
Herb S	Stratum	Plot size:	5'		Total C	ovei			UPL species	30 x 5	150
1.	Sorghum halep			40		1	FACU	4	·Total	155	590
2.	Toxicodendron			15			FAC	3		revalence Inde	0.0.
3. 4.	Agrimonia parv Vernonia gigan			10 10		1	FACW FAC	3	Hydrophytic Ve	egetation indicates to the state of the stat	
5.	Solidago canad			5		<u>, </u>	FACU	4		e Test is >50%	
6.										e Index is ≤3.0°	
7.										gical Adaptation	
8.				80	Total C	over				tic Hydrophytic	
Woody	Vine Stratum	Plot size:	15'		Total O	OVCI				hydric soil and	
1.		-								iust be present, ed or problema	
2.				0	Total C					C Vegetation P	
F	Remarks:			<u> </u>	Total C	over			Yes	No X	esent?
										110	
SOIL											
SOIL				e to depth ne	eded to	docun	nent the indicator or		n absence of inc	dicators.)	_
SOIL	Depth	Ţ.	/latrix				Redox Featu	res		•	
SOIL				e to depth ne	eeded to				ure R	dicators.) Remarks	
SOIL	Depth (inches)	Color	/latrix %				Redox Featu	res Text	ure R	•	
SOIL	Depth (inches) 0-18	Color 10YR 4/2	Matrix % 100	Color	%	Type*	Redox Featu	res Text Si	ure R	Remarks	
SOIL	Depth (inches) 0-18	Color 10YR 4/2	Matrix % 100	Color	% ced Mat	Type*	Redox Featu Loc** -Coated Sand grains	res Text Si	ure R	Remarks	
	Depth (inches) 0-18 *Type: C-	Color 10YR 4/2 =Concentra	Matrix % 100	Color	% ced Mat Hydric Sandy	rix, CS=	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1)	res Text Si	ure R	Remarks ning, M=Matrix rk Surface (F6)	
	Depth (inches) 0-18 *Type: C= Histosol (A1) Histic Epipedor	Color 10YR 4/2 =Concentra	Matrix % 100	Color	ced Mat Hydric Sandy	rix, CS= Soil In Mucky Mucky Pe	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat	res Text Si	ion: PL=Pore Lin	Remarks ning, M=Matrix rk Surface (F6) Dark Surface (F	77)
	Depth (inches) 0-18 *Type: C= Histosol (A1) Histic Epipedor Black Histic (A3)	Color 10YR 4/2 =Concentra	Matrix % 100	Color	ced Mat Hydric Sandy 5cm Mu Sandy	Type* rix, CS= Soil In Mucky Mucky Pe Gleyed	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4)	res Text Si	ion: PL=Pore Lin Redox Da Depleted I Redox De	Remarks ning, M=Matrix rk Surface (F6) Dark Surface (F8) pressions (F8)	,
	Depth (inches) 0-18 *Type: C= Histosol (A1) Histic Epipedor	Color 10YR 4/2 =Concentra n (A2) 3) de (A4)	Matrix % 100	Color	ced Mat Hydric Sandy 5cm Mu Sandy Sandy	rix, CS= Soil In Mucky Mucky Pe	Redox Featu Loc** -Coated Sand grains dicators: dineral (S1) at or Peat Matrix (S4) S5)	res Text Si	ion: PL=Pore Lin Redox Da Depleted I Redox Do Indicators for I	Remarks ning, M=Matrix rk Surface (F6) Dark Surface (F8) pressions (F8)	/dric Soils
	Depth (inches) 0-18 *Type: C= Histosol (A1) Histic Epipedor Black Histic (A: Hydrogen Sulfii Stratified Layer 2 cm Muck (A1	Color 10YR 4/2 =Concentra n (A2) 3) de (A4) s (A5) 0)	Matrix % 100 tion, D=Depleti	Color	ced Mat Hydric Sandy Sandy Sandy Strippe Loamy	Type* rix, CS= Soil In Mucky Pe Gleyed Redox (d Matrix Mucky I	Redox Featu Loc** -Coated Sand grains dicators: Mineral (S1) at or Peat Matrix (S4) S5) (S6) Mineral (F1)	res Text Si	ion: PL=Pore Lin Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang	Remarks Aming, M=Matrix Rk Surface (F6) Dark Surface (F8) Problematic Hylirie Redox (A16) ganese Masses	/dric Soils
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Restri F HY Wetlar	Depth (inches) 0-18 *Type: C= Histosol (A1) Histic Epipedor Black Histic (A: Hydrogen Sulfic Stratified Layer 2 cm Muck (A1 Depleted Belov Thick Dark Sur ctive Layer (if continued to the cont	Color 10YR 4/2 =Concentra n (A2) 3) de (A4) s (A5) 0) v Dark Surfiface (A12) observed): ndicators: Prim (A1) ble (A2) 31) sits (B2) B3) ust (B4) B5) ble on Aeria tated Conca Surface Water Tabl	Matrix % 100 tion, D=Depleti ace (A11) Type: Depth (Inches) ary Indicators al Imagery (B7) ave Surface ater Present? e Present?	Color On, RM=Redu Check all th Water Aquat True A Hydro Oxidiz Prese Recer Thin M Guage Other Yes Yes	ced Mat Hydric Sandy Strippe Loamy Loamy Deplete at apply Stainec ic Fauna Aquatic F gen Sulf led Rhiz nce of R It Iron R Muck Su e or Wel No	Type* Type* Soil In Mucky N Gleyed Gleyed Gleyed Matrix Mucky I Leaves (B13) Plants (B13) Plants (B13) Plants (B13) Cosphere Leduced eduction rface (CI Data (II)	Redox Featu Loc** -Coated Sand grains dicators: dineral (S1) at or Peat Matrix (S4) S5) (S6) Wineral (F1) Matrix (F2) x (F3) Hydric Soil Pre	res Text Si **Locat	re Redox Da Redox Da Depleted I Redox Fra Iron-Mang Very Shall Other Yes Secondar Surface Soil Cra Drainage Patter Dry-Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes	Remarks Aning, M=Matrix In Surface (F6) Dark Surface (F) Problematic Hy irie Redox (A16 panese Masses Iow Dark Surface No X In Indicators Icks (B6) Ins (B10) Iter Table (C2) Is (C8) Ie on Aerial Imalesed Plants (D1 Sition (D2) Ist (D5) Present?	ydric Soils) (F12) pe (F12) gery (C9)
Restrice Field (Depth (inches) 0-18 *Type: C= Histosol (A1) Histic Epipedor Black Histic (A: Hydrogen Sulfic Stratified Layer 2 cm Muck (A1 Depleted Belov Thick Dark Sur ctive Layer (if continued to the cont	Color 10YR 4/2 =Concentra n (A2) 3) de (A4) s (A5) 0) v Dark Surfface (A12) observed): ndicators: Prim (A1) ble (A2) 81) solits (B2) B3) ust (B4) B5) ble on Aeria lated Conca Surface Water Tabl Saturation	Matrix % 100 tion, D=Depleti ace (A11) Type: Depth (Inches) ary Indicators al Imagery (B7) ave Surface ater Present? e Present? Present?	Color On, RM=Redu On, RM=Redu Check all th Water Aquat True A Hydro Oxidiz Prese Recer Thin M Guage Other Yes Yes Yes	ced Material	Type* Trix, CS= Soil In Mucky Ne Gleyed (d Matrix Mucky I Gleyed (d Matrix I I I I I I I I I I I I I I I I I I	Redox Featu Loc** -Coated Sand grains dicators: dineral (S1) at or Peat Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Hydric Soil Pre	res Text Si **Locat	re Redox Da Redox Da Depleted Redox Da Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondar Surface Soil Cra Drainage Patter Dry-Season Wat Crayfish Burrows Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes	Remarks Aning, M=Matrix rk Surface (F6) Dark Surface (F6) Dark Surface (F6) Problematic Hy irie Redox (A16 janese Masses low Dark Surface No X ry Indicators acks (B6) as (B10) ter Table (C2) s (C8) le on Aerial Ima ased Plants (D1) sition (D2) st (D5)	ydric Soils) (F12) pe (F12) gery (C9)

Site: Client: I	Ameri nvestigator(s):	/ Lick 138k\ can Electric N. Houk, E	Power . Holt	City/County: State: OH		ection,	Township, Range: Landform	Te	Sec erraces	2023 Data Poir 19, T 5N, R 21W Local Relief	Convex
	Slope (%):	1-3	Lat. 3	39.075976	Long.		-82.956496	Datum	NAD 83	NWI Class:	N/A
Soli ivi	ap Unit Name: imatic/hydrolog	Omulga Sili	t loam, 2 to 6 persons typical for time	ercent slopes le of vear?	Y/N	Υ					
0.	Vegetation	-	. Soil	or Hy	drology		significantly disturbed				
	Vegetation		, Soil	or Hy	drology		naturally problematic				
Are No	ormal Circumst IARY OF FIND	ances Prese	ent? Y	'es X	No						
SUIVIIV			tation Present?	Yes	No	Х					
	•	Hydri	c Soil Present?	Yes	No	$\frac{\chi}{\chi}$		Is the I	DP within a	Wetland?	
_			ology Present?		No	X		Yes	No	X	
Remar	ks: Tation	Does not r	neet all wetlan	id criteria							
				Absolute %	Dom	inant					
Tree S	tratum_	Plot size:	30'	Cover		ecies	Indicator Status	S			
1.		•								inance Test Wor	ksheet
2. 3.					· 					dominant species	. 0
3. 4.				-	· 				Total number	L, FACW, or FAC er of dominant	·
5.									species acro	oss all strata:	5
Ol	011	5 1	451	0	Total C	over			Percent of c	lominant species	0.00
	<u>Stratum</u> Elaeagnus um	Plot size:	15'	10	,	Y	UPL			L, FACW, or FAC Index Workshe	:
	Rubus occide			5		Y	UPL	5		cover of:	5 1
3.									OBL specie	s 0 x	
4.				-					FACW spec		2 0
5.				15	Total C	`over			FAC specie FACU speci	$\frac{0}{100}$ x les $\frac{0}{100}$ x	
Herb S	tratum_	Plot size:	5'	- 10	- rotar C	, O V C I			UPL species		
1.	Cirsium arven			30		Y	FACU	4	[·] Total	95	405
2.	Phytolacca an Solidago cana			20 20	 ,	<u>Y</u> Y	FACU FACU	4	Llyral was a by #1	Prevalence Ind	
3. 4.	Setaria faberi	iuerisis		10		N	UPL	5		c Vegetation Ind I Test for Hydroph	
5.					-					nance Test is >50	
6.										lence Index is ≤3	
7. 8.				-					Norpi	nological Adaptati ematic Hydrophyt	ons [*]
0.				80	Total C	over				rs of hydric soil a	
	Vine Stratum	Plot size:	15'		-					gy must be prese	
1.										sturbed or problen	
2.				0	Total C	cover				hytic Vegetation	
F	Remarks:			-	. 010. 0				Yes		X
SOIL	Dua	(ila Danasis	tion. (December					u f!		f in diagtons \	
	Depth		Matrix	e to depth ne	eaea t	docui	nent the indicator or Redox Featu		i absence o	i indicators.)	
	(inches)	Color	%	Color	%	Type*	Loc**	Text	ure	Remarks	
	0-18	10YR 5/2	100					Sil	_		
	*Type: C	=Concentra	tion. D=Depleti	on. RM=Redu	ced Ma	trix. CS:	=Coated Sand grains	**Locat	ion: PL=Por	e Lining, M=Matri	X
			, = = орго	,	Hydric	Soil In	dicators:				
	Histosol (A1)	- (40)					Mineral (S1)	-		x Dark Surface (F	,
	Histic Epipedo Black Histic (A	on (A2) (3)					eat or Peat Matrix (S4)	-		ted Dark Surface x Depressions (F	
	Hydrogen Sulf					Redox (-		for Problematic	
	Stratified Laye					d Matrix		_		Prairie Redox (A	
	2 cm Muck (A Depleted Belo		200 (411)		Loamy	Mucky	Mineral (F1) Matrix (F2)	-		/langanese Mass Shallow Dark Sur	
	Thick Dark Su		ace (ATT)			ed Matri		-	Other		iace (F12)
Restri	ctive Layer (if						,		0 11.101		
			Depth (Inches)	:			Hydric Soil Pre	esent?	Yes	No	X
	Remarks: DROLOGY										
	nd Hydrology	Indicators:									
	G ()1/.	Prim	nary Indicators	(check all th	at apply	y)	(5.0)			ndary Indicators	
	Surface Water High Water Ta				Stained ic Faun	d Leave	s (B9)			l Cracks (B6) atterns (B10)	
	Saturation (A3					Plants (B14)			Water Table (C2)
	Water Marks (́В1)		Hydro	gen Sul	fide Od	or (C1)		Crayfish Bu	rrows (C8)	,
	Sediment Dep						es on Living Roots			isible on Aerial I	
	Drift Deposits Algal Mat or C						I Iron (C4) n in Tilled Soil (C6)			Stressed Plants (I Position (D2)	(ו'ע
	Iron Deposits					rface (C			FAC-Neutra		
	Inundation Vis	ible on Aeria	al Imagery (B7)	Guage		ll Data (\ - <i>/</i>	
Field 4	Sparsely Vege	etated Conca		Other	No		Depth (inches)				
	The emucht are	Curfo 14/									
rieia (Observations:			Yes Yes		X		Hydrol	ogy Indicate	ors Present?	
		Water Tabl Saturation	e Present? Present?	Yes Yes	No No	X X	Depth (inches) Depth (inches)		ogy Indicat Yes	ors Present? No X	
	be Recorded D	Water Tabl Saturation	e Present? Present?	Yes Yes	No No	X X	Depth (inches)				

Site: Client:		City/County: State: OH	Sec	Pike County tion, Township, Range:			Data Point: 5N, R 21W	DP AR1
ĺ	Investigator(s): N. Houk, E. Holt	39.076254	_		m Te			Convex
Soil Ma	Slope (%): 1-3 Lat. ap Unit Name: Omulga silt loam, 0		Long.	-82.954791	Datum	NAD 83 NW	T Class.	N/A
CI	limatic/hydrologic conditions typical	for time of year?	Y/N	Υ				
	Vegetation, Soil	or Hy	drology	significantly disturbed				
Are No	Vegetation, Soil ormal Circumstances Present?	Yes X	drology No	naturally problematic				
	IARY OF FINDINGS							
	Hydrophytic Vegetation Pre	esent? Yes	No _	X	1- 41	DD wildelin - Wed	110	
	Hydric Soil Pre Wetland Hydrology Pre		No No	XX	Yes	DP within a Wet		
Remar	rks: Does not meet all v	vetland criteria	.,,,	~				
VEGE	TATION	Absolute %	Domina	ant		I		
Tree S	Stratum Plot size: 30'	Cover	Specie	Indicator Stat	us			
1.	Platanus occidentalis	15	Y	FACW	2	Dominan	ce Test Works	heet
2.						Number of domi		2
3. 4.						that are OBL, FA Total number of	ACW, or FAC:	-
5.						species across a		6
		15	Total Cov	ver		Percent of domin	nant species	33.33
	Stratum Plot size: 15' Elaeagnus umbellata	30	Υ	UPL	_	that are OBL, FA		
	Catalpa speciosa	10	- <u>T</u>	FAC	<u>5</u> 3	Prevalence Inde Total % cover		
	Rosa multiflora	5	N	FACU	4	OBL species	0 x 1	0
	Acer rubrum	5	N	FAC	3	FACW species	20 x 2	40
5.		50	Total Cov	vor.		FAC species FACU species	15 x 3 50 x 4	45 200
Herb S	Stratum_ Plot size: 5'		10tal Cov	CI		UPL species	75 x 5	375
1.	Schedonorus arundinaceus	25	Y	FACU	4	Total	160	660
	Medicago sativa	25 20	- <u>Y</u>	UPL	5		revalence Index	
	Trifolium pratense Plantago lanceolata	15	- T	FACU UPL	<u>4</u> 5	Hydrophytic Ve Rapid Tes	getation indicates the state of	
5.	Daucus carota	5	N	UPL	5		e Test is >50%	
	Symphyotrichum lateriflorum	5	N	FACW	2		e Index is ≤3.0*	
7. 8.							gical Adaptation tic Hydrophytic	
0.		95	Total Cov	ver			hydric soil and	
	y Vine Stratum Plot size: 15'		-				ust be present,	
1. 2.			-			, ,,	ed or problemat	
۷.		0	Total Cov	ver			: Vegetation Pı	
	Remarks:					Yes	No x	
SOIL		escribe to denth no	aded to o	locument the indicator of	r confirm	n absence of inc	licators \	
	Profile Description: (De	cooring to acpuir in	caca to c	Redox Fea		ii absence or inc	11001013.7	
	Profile Description: (De Depth Matrix				ta.oo			
	Depth Matrix (inches) Color %		% 7	Type* Loc**	Text		Remarks	
	Depth Matrix		% 7	Гуре* Loc**			Remarks	
	Depth Matrix (inches) Color % 0-18 10YR 5/2 100)			Text	iL		
	Depth Matrix (inches) Color %)	ced Matrix	κ, CS=Coated Sand grains	Text	iL		
	Depth Matrix)	ced Matrix	c, CS=Coated Sand grains	Text	iL tion: PL=Pore Lin	ing, M=Matrix	
	Depth Matrix)	ced Matrix Hydric S Sandy Mu	κ, CS=Coated Sand grains	Text	tion: PL=Pore Lin		77)
	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3))	ced Matrix Hydric S Sandy Mu 5cm Muc Sandy Gl	c, CS=Coated Sand grains coil Indicators: ucky Mineral (S1) ky Peat or Peat eyed Matrix (S4)	Text	tion: PL=Pore Lin Redox Da Depleted I Redox De	ning, M=Matrix rk Surface (F6) Dark Surface (F pressions (F8)	,
	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4))	ced Matrix Hydric S Sandy Mu 5cm Muc Sandy Gl Sandy Re	k, CS=Coated Sand grains coil Indicators: ucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5)	Text	Redox Da Depleted I Redox De Indicators for I	ing, M=Matrix rk Surface (F6) Dark Surface (F pressions (F8) Problematic Hy	∕ dric Soils
	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5))	ced Matrix Hydric S Sandy Mu 5cm Muc Sandy Gl Sandy Re Stripped	c, CS=Coated Sand grains coil Indicators: ucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6)	Text	Redox Da Redox Do Redox Do Indicators for I Coast Pra	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16	/dric Soils
	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11)	Depletion, RM=Redu	ced Matrix Hydric S Sandy Mi Scandy GI Sandy Re Stripped I Loamy M Loamy G	c, CS=Coated Sand grains ioil Indicators: ucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) ucky Mineral (F1) leyed Matrix (F2)	Text	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall	ing, M=Matrix rk Surface (F6) Dark Surface (F pressions (F8) Problematic Hy	/dric Soils i) (F12)
	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depletion, RM=Redu	ced Matrix Hydric S Sandy Mi Scandy GI Sandy Re Stripped I Loamy M Loamy G	c, CS=Coated Sand grains ioil Indicators: Licky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Licky Mineral (F1)	Text	Redox Da Depleted I Redox De Indicators for I Coast Pra	rk Surface (F6) Dark Surface (F8) Pressions (F8) Problematic Hy irie Redox (A16 anese Masses	/dric Soils i) (F12)
	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type:	Depletion, RM=Redu	ced Matrix Hydric S Sandy Mi Scandy GI Sandy Re Stripped I Loamy M Loamy G	k, CS=Coated Sand grains Goil Indicators: Licky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Lucky Mineral (F1) Leyed Matrix (F2) Matrix (F3)	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses ow Dark Surface	/dric Soils i) (F12)
Restric	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (In	Depletion, RM=Redu	ced Matrix Hydric S Sandy Mi Scandy GI Sandy Re Stripped I Loamy M Loamy G	c, CS=Coated Sand grains ioil Indicators: ucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) ucky Mineral (F1) leyed Matrix (F2)	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall	rk Surface (F6) Dark Surface (F8) Pressions (F8) Problematic Hy irie Redox (A16 anese Masses	/dric Soils i) (F12)
Restric	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inches) Remarks: DROLOGY	Depletion, RM=Redu	ced Matrix Hydric S Sandy Mi Scandy GI Sandy Re Stripped I Loamy M Loamy G	k, CS=Coated Sand grains Goil Indicators: Licky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Lucky Mineral (F1) Leyed Matrix (F2) Matrix (F3)	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses ow Dark Surface	/dric Soils i) (F12)
Restric	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inches) Remarks: DROLOGY Ind Hydrology Indicators:	Depletion, RM=Redu	ced Matrix Hydric S Sandy Mu 5cm Muc Sandy Gl Sandy Re Sandy Re Loamy M Loamy M Loamy G	k, CS=Coated Sand grains Goil Indicators: Licky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Lucky Mineral (F1) Leyed Matrix (F2) Matrix (F3)	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Prag Iron-Mang Very Shall Other	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses ow Dark Surface No X	/dric Soils i) (F12)
Restric F HY Wetlar	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inches Color (A12) Color (A	Depletion, RM=Redu	ced Matrix Hydric S Sandy Mu 5cm Muc Sandy GI Sandy Re Stripped I Loamy M Loamy G Depleted at apply) Stained L	(, CS=Coated Sand grains ioil Indicators: ucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) ucky Mineral (F1) leyed Matrix (F2) Matrix (F3) Hydric Soil P	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondar Surface Soil Cra	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses ow Dark Surface No X	/dric Soils i) (F12)
Restric F HY Wetlar	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inches Company Colors) Remarks: DROLOGY Ind Hydrology Indicators: Primary Indicators: Surface Water (A1) High Water Table (A2)	Depletion, RM=Redu	ced Matrix Hydric S Sandy Mi 5cm Muc Sandy Re Sandy Re Stripped Loamy M Loamy G Depleted at apply) Stained L ic Fauna (c, CS=Coated Sand grains ioil Indicators: Licky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Licky Mineral (F1) Leyed Matrix (F2) Matrix (F3) Hydric Soil P Leaves (B9) B13)	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondal Surface Soil Cra Drainage Patteri	rk Surface (F6) Dark Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses ow Dark Surface No X Ty Indicators cks (B6) ns (B10)	/dric Soils i) (F12)
Restric F HY Wetlar	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inches) Remarks: DROLOGY Ind Hydrology Indicators: Primary Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3)	Depletion, RM=Redu Depletion, RM=Redu Comparison of the comparis	ced Matrix Hydric S Sandy Mo 5cm Muc Sandy Gl Sandy Re Stripped Loamy M Loamy G Depleted at apply) Stained L ic Fauna (Aquatic Pla	c, CS=Coated Sand grains ioil Indicators: Jocky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Jucky Mineral (F1) Jucky Mineral (F2) Matrix (F3) Hydric Soil P Leaves (B9) B13) ants (B14)	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondal Surface Soil Cra Dry-Season Wai	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses low Dark Surface No X Ty Indicators cks (B6) as (B10) ter Table (C2)	/dric Soils i) (F12)
Restric F HY Wetlar	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inches) Remarks: (DROLOGY Ind Hydrology Indicators: Primary Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Depletion, RM=Redu Depletion, RM=Redu Cators (check all the Water Aquat Aquat Hydro Oxidiz	ced Matrix Hydric S Sandy Mi 5cm Muc Sandy Gl Sandy Re Stripped I Loamy M Loamy G Depleted at apply) Stained L ic Fauna (Aquatic Pla gen Sulfid ed Rhizos	(, CS=Coated Sand grains ioil Indicators: ucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) ucky Mineral (F1) leyed Matrix (F2) Matrix (F3) Hydric Soil P Leaves (B9) B13) ants (B14) e Odor (C1) pheres on Living Roots	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondal Surface Soil Cra Drainage Patter Crayfish Burrow. Saturation Visibl	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses ow Dark Surface No X Ty Indicators cks (B6) ns (B10) ter Table (C2) s (C8) e on Aerial Ima	ydric Soils) (F12) pe (F12) gery (C9)
Restric F HY Wetlar	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inches Company Indicators: Primary Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Depletion, RM=Redu Depletion, RM=Redu Cators (check all the Water Aquat True A Hydro Oxidiz Prese	ced Matrix Hydric S Sandy Mi 5cm Muc Sandy GI Sandy Re Sandy Re Loamy M Loamy M Loamy G Depleted at apply) Stained L ic Fauna (Aquatic Pla gen Sulfid ded Rhizos nce of Rec	(, CS=Coated Sand grains ioil Indicators: ucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) ucky Mineral (F1) leyed Matrix (F2) Matrix (F3) Hydric Soil P eaves (B9) B13) ants (B14) e Odor (C1) pheres on Living Roots duced Iron (C4)	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondal Surface Soil Cra Drainage Patter Dry-Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres	rk Surface (F6) Dark Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses ow Dark Surface No X Ty Indicators acks (B6) as (B10) ter Table (C2) s (C8) e on Aerial Ima sed Plants (D1)	ydric Soils) (F12) pe (F12) gery (C9)
Restric F HY Wetlar	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Ir Remarks: DROLOGY Ind Hydrology Indicators: Primary Indic Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Depletion, RM=Redu Depletion, RM=Redu Cators (check all the Water Aquat True A Hydro Oxidiz Prese Recer	ced Matrix Hydric S Sandy Mi 5cm Muc Sandy Re Sandy Re Stripped Loamy M Loamy G Depleted at apply Stained L ic Fauna (Aquatic Pla gen Sulfid ed Rhizos nce of Ren it Iron Rec	c, CS=Coated Sand grains ioil Indicators: Lucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Leyed Matrix (F2) Matrix (F3) Hydric Soil P Leaves (B9) B13) ants (B14) e Odor (C1) epheres on Living Roots duced Iron (C4) fluction in Tilled Soil (C6)	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondal Surface Soil Cra Drainage Patter Dry-Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres Geomorphic Pos	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses low Dark Surface No X Ty Indicators acks (B6) as (B10) ter Table (C2) s (C8) e on Aerial Imased Plants (D1) sition (D2)	ydric Soils) (F12) pe (F12) gery (C9)
Restric F HY Wetlar	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inchemosis) Remarks: DROLOGY Ind Hydrology Indicators: Primary Indic Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Depletion, RM=Redu Depletion, RM=Redu Cators (check all th Aquat True / Hydro Oxidiz Prese Recer Thin M	ced Matrix Hydric S Sandy Mi 5cm Muc Sandy Ri Sandy Ri Sandy Ri Sandy Ri Loamy M Loamy G Depleted at apply) Stained L ic Rauatic Pla gen Sulfid ed Rhizos nce of Rec fut Iron Rec Muck Surfa	c, CS=Coated Sand grains ioil Indicators: Licky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Leyed Matrix (F2) Matrix (F3) Hydric Soil P Leaves (B9) B13) ants (B14) e Odor (C1) pheres on Living Roots duced Iron (C4) fuction in Tilled Soil (C6) ace (C7)	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondal Surface Soil Cra Drainage Patter Dry-Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses low Dark Surface No X Ty Indicators acks (B6) as (B10) ter Table (C2) s (C8) e on Aerial Imased Plants (D1) sition (D2)	ydric Soils) (F12) pe (F12) gery (C9)
Restric F HY Wetlar	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inches) Remarks: Primary Indic Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfa	Depletion, RM=Redu Depletion, RM=Redu Cators (check all the Water Aquat True / Hydro Oxidiz Prese Recer Thin M y (B7) Guagice Other	ced Matrix Hydric S Sandy Mo Sandy Gl Sandy Ro Sandy Ro Sandy Ro Sandy Ro Loamy M Loamy G Depleted at apply) Stained L ic Fauna (Aquatic Pla gen Sulfid ed Rhizos nce of Rec Muck Surfa e or Well D	c, CS=Coated Sand grains ioil Indicators: Lucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Leyed Matrix (F2) Matrix (F3) Hydric Soil P Leaves (B9) B13) Leants (B14) e Odor (C1) Lepheres on Living Roots Luced Iron (C4) Luction in Tilled Soil (C6) Luce (C7) Locate (C7) Locate (C9) Locate (C7) Locate (C9) Locate (C7)	Text Si ***Locat	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondal Surface Soil Cra Drainage Patter Dry-Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres Geomorphic Pos	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses low Dark Surface No X Ty Indicators acks (B6) as (B10) ter Table (C2) s (C8) e on Aerial Imased Plants (D1) sition (D2)	ydric Soils) (F12) pe (F12) gery (C9)
Restric F HY Wetlar	Depth (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inches) Remarks: DROLOGY Ind Hydrology Indicators: Primary Indicators: Primary Indicators: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surface Observations: Surface Water Preservance Doservations: Surface Water Preservance **Type: C=Concentration, D=D **Typ	Depletion, RM=Redu Depletion, RM=Redu Cators (check all the Water Aquat True / Hydro Oxidiz Prese Recer Thin Manager Company (B7) Guago ce Other Prese Company (Park Prese P	ced Matrix Hydric S Sandy Mi 5cm Muc Sandy Gl Sandy Re Sandy Re Stripped I Loamy M Loamy G Depleted at apply) Stained L ic Fauna (Aquatic Pla gen Sulfid ed Rhizos nce of Re fut Iron Rec Muck Surfa e or Well D	c, CS=Coated Sand grains ioil Indicators: Jucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Jucky Mineral (F1) leyed Matrix (F2) Matrix (F3) Hydric Soil P Leaves (B9) B13) Jants (B14) e Odor (C1) Eyheres on Living Roots Juction in Tilled Soil (C6) Juce (C7) Juata (D9) X Depth (inches)	resent?	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondal Surface Soil Cra Drainage Patter Dry-Season Wat Crayfish Burrow. Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses ow Dark Surface No X Ty Indicators Cks (B6) ns (B10) ter Table (C2) s (C8) e on Aerial Ima sed Plants (D1) sition (D2) st (D5)	ydric Soils) (F12) pe (F12) gery (C9)
Restric F HY Wetlar	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inches) Remarks: Primary Indic Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfa	Depletion, RM=Redu Depletion, RM=Redu Cators (check all the Water Aquat True A Hydro Oxidiz Prese Recer Thin N Guagree Other Yes t? Yes	ced Matrix Hydric S Sandy Mo Sandy Gl Sandy Ro Sandy Ro Sandy Ro Sandy Ro Loamy M Loamy G Depleted at apply) Stained L ic Fauna (Aquatic Pla gen Sulfid ed Rhizos nce of Rec Muck Surfa e or Well D	c, CS=Coated Sand grains ioil Indicators: Lucky Mineral (S1) ky Peat or Peat eyed Matrix (S4) edox (S5) Matrix (S6) Leyed Matrix (F2) Matrix (F3) Hydric Soil P Leaves (B9) B13) Leants (B14) e Odor (C1) Lepheres on Living Roots Luced Iron (C4) Luction in Tilled Soil (C6) Luce (C7) Locate (C7) Locate (C9) Locate (C7) Locate (C9) Locate (C7)	resent?	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondal Surface Soil Cra Drainage Patter Dry-Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres Geomorphic Pos	rk Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses ow Dark Surface No X Ty Indicators Cks (B6) ns (B10) ter Table (C2) s (C8) e on Aerial Ima sed Plants (D1) sition (D2) st (D5)	ydric Soils) (F12) pe (F12) gery (C9)
Restric F HY Wetlar	Depth Matrix (inches) Color % 0-18 10YR 5/2 100 *Type: C=Concentration, D=D Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) ctive Layer (if observed): Type: Depth (Inchem Inchem Inch	Depletion, RM=Redu Depletion, RM=Redu Comparison of the comparis	ced Matrix Hydric S Sandy Mi 5cm Muc Sandy Ri Sandy Ri Sandy Ri Sandy Ri Loamy M Loamy G Depleted at apply) Stained L ic Fauna (Aquatic Pla gen Sulfid ed Rhizos nce of Rec fuck Surfa e or Well D No No No	eaves (B9) B13) B13) B14) Be Odor (C1) pheres on Living Roots duced Iron (C4) duction in Tilled Soil (C6) ace (C7) Data (D9) X Depth (inches) X Depth (inches) X Depth (inches)	resent?	Redox Da Depleted I Redox De Indicators for I Coast Pra Iron-Mang Very Shall Other Yes Secondal Surface Soil Cra Drainage Patter Dry-Season Wat Crayfish Burrow. Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes	rk Surface (F6) Dark Surface (F6) Dark Surface (F8) Problematic Hy irie Redox (A16 anese Masses ow Dark Surface No X Ty Indicators cks (B6) ns (B10) ter Table (C2) s (C8) e on Aerial Ima sed Plants (D1) sition (D2) st (D5) Present?	ydric Soils) (F12) pe (F12) gery (C9)

Site: Client: I	Ameri nvestigator(s):	/ Lick 138k\ can Electric N. Houk. E	Power	City/County: State: OH	s	ection,	ike County Township, Range: Landform	=	Sec	2023 Data Poir 19, T 5N, R 21W Local Relief	nt: DP AR2 Convex
	Slope (%):	1-3	Lat. 3	39.076891	Long.		-82.954731	Datum	NAD 83	NWI Class:	N/A
Soil Ma	ap Unit Name: imatic/bydrolog	Omulga sil	t loam, 0 to 2 p	ercent slopes	Y/N	Υ					
Ci	Vegetation	-	. Soil	or Hy	drology		significantly disturbed				
	Vegetation		, Soil	or Hy	drology		naturally problematic				
Are No	ormal Circumst IARY OF FIND	ances Prese	ent? Y	'es X	No						
SUIVIIVI			tation Present?	Yes	No	Х					
	•	Hydri	c Soil Present?	Yes	No	X		Is the I	DP within a	Wetland?	
Domor			ology Present?		No	Х		Yes	No	X	
Remar VEGE	TATION	Does not i	neet all wetlar	ia criteria							
	tratum	Plot size:	20'	Absolute %	Dom	inant	Indicator Status				
	traturii_	FIUL SIZE.		Cover	Spe	cies	mulcator Status	5	_		
1.										inance Test Wordominant species	
2. 3.											1
4.									Total number	L, FACW, or FAC er of dominant	3
5.									species acre	oss all strata:	
Shruh	Stratum	Plot size:	15'	0	Total C	over				lominant species L, FACW, or FAC	
1.	<u>Otratam</u>	1 101 3120.	10							Index Workshe	
2.									Total %	cover of:	
3.									OBL specie FACW species		
4. 5.				-					FAC specie		2 0 90
-				0	Total C	over			FACU speci	es 50 x	
	Stratum_	Plot size:	5'	20	,	,	EAOU		UPL species		
1. 2.	Trifolium prate Setaria pumila	ense		30		<u> </u>	FACU FAC	3	Total	90 Prevalence In	dex: 340 3.78
3.	Schedonorus	arundinaceu	IS	20		· Y	FACU		Hydrophyti	c Vegetation Inc	
4.	Plantago lance	eolata		10		1	UPL	5		Test for Hydropl	
5. 6.										nance Test is >50 dence Index is <3	
7.					-					nological Adaptat	
8.									Proble	ematic Hydrophy	tic Vegetation*
\A/l-	. \ // Ott	District-	451	90	Total C	over			*Indicato	rs of hydric soil a	ind wetland
vvooay	Vine Stratum	Plot size:	15						hydrolog	gy must be prese	ent, unless
2.			 ,	-			-			turbed or probler	
	S	T		0	Total C	over				hytic Vegetation	
SOIL	Remarks:								Yes	No	X
JOIL	Pro	file Descrip	tion: (Describ	e to depth ne	eded to	docur	ment the indicator or	confirm	n absence o	f indicators.)	
	Depth		Matrix		0.4	·	Redox Featu				
	(inches) 0-18	Color 10YR 5/2	% 100	Color	%	Type"	Loc**	Text Si		Remarks	
	0-10	10110 3/2	100					Oi	_		
	*Type: C	=Concentra	ation, D=Depleti	ion, RM=Redu	iced Mat	rix, CS:	=Coated Sand grains	**Locat	ion: PL=Por	e Lining, M=Matr	ix
	Histosol (A1)						Mineral (S1)		Redo	x Dark Surface (F	-6)
	Histic Epipedo	n (A2)			5cm M	ucky Pe	eat or Peat			ted Dark Surface	
	Black Histic (A						Matrix (S4)	-		x Depressions (F	
	Hydrogen Sulf Stratified Laye					Redox (d Matrix				for Problematic Prairie Redox (A	
	2 cm Muck (A	10)`´			Loamy	Mucky	Mineral (F1)	-	Iron-N	Manganese Mass	es (F12)
	Depleted Belo		ace (A11)				Matrix (F2)			Shallow Dark Sui	face (F12)
Postri	Thick Dark Suctive Layer (if	/	Type:		Deplete	ed Matri	X (F3)		Other	'	
ixesti it	ctive Layer (ii	observeuj.	Depth (Inches)):			Hydric Soil Pre	esent?	Yes	No	X
	Remarks:					•					
	DROLOGY nd Hydrology	Indicators:									
vveliai	ia riyarology	Prim	nary Indicators	(check all th	at apply	/)		I	Seco	ndary Indicators	3
	Surface Water	r (A1)	•	Water	^r Stained	Leave	s (B9)			Cracks (B6)	
	High Water Ta				ic Fauna Aquatic I		D14\			atterns (B10) Water Table (C2	2)
	Saturation (A3 Water Marks (Hvdro	gen Sul	fide Odo	or (C1)		Crayfish Bu		2)
	Sediment Dep	osits (B2)		Oxidiz	ed Rhiz	osphere	es on Living Roots		Saturation \	/isible on Aerial I	
	Drift Deposits						I Iron (C4)			Stressed Plants (D1)
	Algal Mat or C Iron Deposits				nt Iron R Nuck Su		n in Tilled Soil (C6)		Geomorphic FAC-Neutra	Position (D2)	
		/ /						\vdash	. AC NOULI		
			al Imagery (B7)	Guag	e or vve	i Dala ((פט				
	Inundation Vis Sparsely Vege	ible on Aeria etated Conc	ave Surface	Other		•	•				
	Inundation Vis	ible on Aeria etated Conca Surface Wa	ave Surface ater Present?	Other	No	Х	Depth (inches)	Hydrol	oay Indicat	ors Prosent?	
Field (Inundation Vis Sparsely Vege Observations:	ible on Aeric etated Conce Surface Wa Water Tabl Saturation	ave Surface ater Present? le Present? Present?	Yes Yes Yes	No No No	X X X	Depth (inches) Depth (inches) Depth (inches)		ogy Indicat	ors Present? No X	
Field (Inundation Vis Sparsely Vege Observations:	ible on Aeric etated Conce Surface Wa Water Tabl Saturation	ave Surface ater Present? le Present? Present?	Yes Yes Yes	No No No	X X X	Depth (inches) Depth (inches)				

APPENDIX D

ORAM FORMS



ORAM Summary Worksheet

		Circle answer	
		or insert score	Result
Narrative Rating	Question 1: Critical Habitat	☐ YES ☑ NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	☐ YES 🖾 NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	☐ YES 🖾 NO	If yes, Category 3.
	Question 4: Significant bird habitat	☐ YES ☑ NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	☐ YES 🖾 NO	If yes, Category 1
	Questions 6: Bogs	☐ YES ☑ NO	If yes, Category 3.
	Question 7: Fens	☐ YES ☑ NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	☐ YES ☑ NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	☐ YES ☑ NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	☐ YES 🖾 NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	☐ YES ☑ NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	☐ YES 🖾 NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	☐ YES ☐ NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	☐ YES 🖾 NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1: Size	2	
	Metric 2: Buffers and surrounding land use	4	
	Metric 3: Hydrology	10	
	Metric 4: Habitat	9	
	Metric 5: Special Wetland Communities	0	
	Metric 6: Plant communities, interspersion, microtopography	4	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	29	Category based on score breakpoints

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

Choices	Circle one		Evaluation
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.	✓ YESWetland is categorized as a Category 3 wetland	□ NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	☐ YES Wetland should be evaluated for possible Category 3 status	⊠ NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	☐ YES Wetland is categorized as a Category 1 wetland	⊠ NO	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been undercategorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?	 ✓ YES Wetland is assigned to the appropriate category based on the scoring range 	□ NO	If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	⊠ NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	Wetland was under categorized by this method. A written justification for recategorization should be provided on Background Information Form	⊠ NO	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hdrologic function s because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rula 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A ritten justification with supporting reasons or information for this determination should be provided.
	ı	Final Ca	ategory

Final Category								
Choose One		☐ Category 2	☐ Category 3					

End of Ohio Rapid Assessment Method for Wetlands

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		uantitative Rating .ick - WL-32A-PEM Rater(s): N. Houk Date: 29 Aug 2023
		I
2	2	Metric 1. Wetland Area (size).
max 6 pts.	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6pts) 25 to <50acrea (10.1 to <20.2ha) (5pts) 10 to <25 acres (4 to <10.1ha) (4pts) 3 to <10 acres (1.2 to <4ha) (3pts) 0.3 to <3 acres (0.12 to 1.2ha) (2pts) 1 to <0.3acres (0.04 to <0.12ha) (1pts) <0.1 acres (0.04ha) (0pts)
4	6	Metric 2. Upland buffers and surrounding land use.
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one and assign score. Do not double check. □ WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts) □ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts) □ NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts) □ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Calculate average buffer width. Select only one and assign score. Do not double check. □ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7pts) □ LOW. Old field (>10 years), shrub land, young second growth forest. (5pts) ■ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)
10	16	Metric 3. Hydrology.
Max 30 pts.	subtotal	3a. Sources of Water. Score all that apply
9	25	Metric 4. Habitat Alteration and Development.
Max 20pts.	Subtotal	4a. Substrate disturbance. Score one or double-check and average. None or none apparent (4pts) Recovered (3pts) Recent or no recovery (1pts) Habitat development. Select only one and assign score. Excellent (7pts) Very good (6pts) Good (5pts) Moderately good (4pts) Fair (3pts) Poor to fair (2pts) Poor (pts) 4c. Habitat alteration. Score one or double-check and average. Check all disturbances observed
	25 Subtotal th	☐ Recovered (6pts) ☐ Mowing ☐ Shrub/sapling removal ☐ Recent or no recovery (1pts) ☐ Grazing ☐ Herbaceous/aquatic bed removal ☐ Clear-cutting ☐ Sedimentation ☐ Selective cutting ☐ Dredging ☐ Woody debris removal ☐ Farming ☐ Toxic pollutants ☐ Nutrient enrichment

Site: \	Waverly L	ick - WLA-32F-PEM Rater(s):	N. Houk	(Date:	29 Aug 2023
	25 Subtotal first pa	oge.				
	Subtotal IIIst pa	ge -				
0	25	Metric 5. Special wetland	S.			
Max 10pts	Subtotal	Check all that apply and score as indicated Bog (10pts) Fen (10pts) Old growth forest (10pts) Mature forested wetland (5 pts) Lake Erie coastal/tributary wetland-ur Lake Erie coastal tributary wetland-re Lake Plain Sand Prairies (Oak Openir Relict Wet Prairies (10pts) Known occurrence state/federal threa Significant migratory songbird/water for	stricted hydrongs) (10pts) atened or endowl habitat or	ology (5pts) langered species (10pts) r usage (10pts)		
4	29	Metric 6. Plant communiti	es, int	erspersion, micro top	ography	/. .
Max 20 pts.	Subtotal	6a. Wetland Vegetation Communities	Vegetation	on Community Cover Scale		
		Score all present using 0 to 3 scale. Aquatic Bed Emergent Shrub Forest Mudflats Open Water Other	0 1 2 3	Absent or comprises <0.1ha (0.2471 a Present and either comprises small pa of moderate quality, or comprises a s Present and either comprises significa of moderate quality or comprises a s Present and comprises significant part and is of high quality	art of wetland's ve significant part pu int part of wetland small part and is o	egetation and is ut is of low quality d's vegetation and is of high quality
			NI C	5 ()/ 6		
		6b. Horizontal (plan view) Interspersion Select only one.	low	Description of Vegetation Quality Low spp diversity and/or predominance Talegapt potitive appaies	e of nonnative or	disturbance
		☐ High (5pts) ☐ Moderately high (4pts) ☑ Moderate (3pts) ☐ Moderately low (2pts) ☐ Low (1pts)	mod	Tolerant native species Native spp are dominant component or and/or disturbance tolerant native sp diversity moderate to moderately hig rare threatened or endangered spp	p can also be pre	esent, and species
		None (0pts)6c. Coverage of invasive plants. Refer to	high	A predominance of native species, with tolerant native spp absent or virtually often, but not always, the presence of	absent, and high	h spp diversity and
		Table 1 ORAM long form for list. Add or deduct points for coverage	Mudflat a	nd Open Water Class Quality	,	
		Extensive >75% cover (-5pts)	0	Absent <0.1ha (0.247 acres)		
		Moderate 25-75% cover (-3pts)	1	Low 0.1 to <1ha (0.247 to 2.47)		
		Sparse 5-25% cover (-1)	2	Moderate 1 to <4ha (2.47 to 9.88 acres	s)	
		☐ Nearly absent >5% cover (0pts) ☐ Absent (1pts)	3	High 4ha (9.88 acres) or more		
				ography Cover Scale		
		6d. Micro topography Score all present using 0 to 3 scale.	<u>0</u>	Absent Present you small amounts or if more	common of man	ainal quality
		Vegetated hummocks/tussocks	2	Present very small amounts or if more Present in moderate amounts, but not		
		Coarse woody debris >15cn (6in) Standing dead >25cm (10in) dbh	3	In small amounts of highest quality Present in moderate or greater amoun	its and of highest	quality
		Amphibian breeding pools		Trocont in moderate or greater amoun	to and or mynest	quanty

29 GRAND TOTAL (max 100 pts)

Quantitative Rating

Metric 1. Wetland area (max 6pts). Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

score

6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	2
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	
0pts	<0.1 acres (0.04ha)	

Table 2. Metric to English conversion table with visual estimation sizes

acres	ft ²	yd²	ft on side	yd on side	ha	m²	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points. Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

score

b) 10 us	verage Buffer Width (abw). Calculate the average buffer width and select only one score. To calculate abw, estimate uffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 00m, 25m, 10m and 0m would be calculated as follows: abw = $(50m + 25m + 10m + 0m)/4 = 21.25m$. Intensive land sees are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced asture, etc.		1
7pts	WIDE. >50m (164ft) or more around perimeter		
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter		
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	\boxtimes	
0pts	VERY NARROW. <10m (<32ft) around perimeter.		
	ntensity of predominant surround land use(s). Select one, or double check up to two and average score, for the itensity of the predominant land use(s) outside the wetland's buffer zone (if any).		3
7pts	VERY LOW. 2 nd growth or older forest, prairie, savannah, wildlife area, etc.		
5pts	LOW. Old field (>10 yrs), shrubland, young 2 nd growth forest, etc.		•
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.		•
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.		<u> </u>

6

Metric 3. Hydrology Maximum 30 points. This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity. A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more

than 30 points. score Sources of Water. Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values. 4 High pH groundwater (7.5-9.0) 5pts 3pts Other groundwater 1pt Precipitation \boxtimes \boxtimes 3pts Seasonal surface water Perennial surface water (lake or stream) 5pts Connectivity. Select all that apply and sum score 0 100-year floodplain. "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used. Between stream/lake and other human land use. This question asks whether the wetland is located between a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses Part of wetland or upland (e.g. forest, prairie) complex. Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply. Part of riparian or upland corridor. See description above. 1pt Maximum water depth. Select only one and assign score. The Rater does not need to actually observe the wetland when its water depth is greates in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question. 1 3pts >0.7m (27.6in) 0.4 to 0.7m (15.7 to 27.6in) \boxtimes 1pt <0.4m (<15.7in) Duration of inundation/saturation. Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally 2 Semi permanently to permanently inundated or saturated. 4nts 3pts Regularly inundated or saturated. \boxtimes Seasonally inundated. 2pts П

13

Subtotal

Seasonally saturated in the upper 30cm (12in) of soil.

3e.	Modifications to natural hydrologic regime. Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.							
	It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (Chamaedaphne calyculata) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to that type of wetland. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.							
	Once the Rater has listed all possil category to describe the present st two categories, or where the Rater average the score.	ate of the wetland. In instances when	here th	e Rater believes that a wetland	falls between			
	The labels on the scoring categorie appropriate to consider the scoring very low or no disturbance.	categories as fixed locations on a	hydrol	ogic disturbance continuum, fror	m very high to			
	The Rater may check one or severegime is intact. However, see N				i hydrologic			
C	check all that are observed pres	ent in or near the wetland						
	ditch(es), in or near the we	etland		point source discharges to	the (non-storm	water)		
[tile(s), in or near the wetla	nd		filing/grading activities in o	r near the wetla	and		
	dike(s), in or near the wetl	and		road beds/RR beds in or n	ear the wetland	ı		
	weir(s), in or near the wetl	and		dredging activities in or ne	ar the wetland			
	storm water inputs (addition	on of water)		other (specify)				
	le one answer. Have any of listurbances identified above	YES	NO		NOT SURE	1		
caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so		Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	Assign a score of 12 since there are no or no apparent modifications. Double check "n none apparent" "recovered" and score of 9.5		nt" and			
		3						
Selec	et one or double check adjoining r	number and average the score.				score		
	, ,					3		
12	pts NONE OR NONE APPARENT	 There are no modifications or no 	o modi	fications that are apparent to the	Rater.			

RECOVERED. The wetland appears to have recovered from past modifications.

RECOVERING. The wetland appears to be in the process of recovering from past modifications

RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.

16

Subtotal

12pts 7pts

3pts

range of other factors and activ to hydrology. This metric attem items checked as possible hydr disruptions in its development (ities which affect wetland quality a pts to evaluate these things under ologic disturbances in Question 3 succession state). In other instan- 4. In any case, the Rater should of	pes or wetlands and wetland proces and cause disturbances to wetlands the rubric "habitat alteration." In e will be instead alterations to a wet ces, a disturbance may be appropria carefully consider what is the actual	that are unrelated any instances, land's habitat or ately considered	
the soil and surface substrates of the descriptive but not controlling. In sulfocations on a disturbance continuous Examples of substrate/soil disturba	ne wetland. Note also that the labor ome instances, it may be more applied, from very high to very low or non- once include filling and grading, plo	ge. This question evaluates physically on the scoring categories are into propriate to consider the scoring cate of disturbance. I wing, grazing (hooves), vehicle use ther mechanical disturbances to the	ended to be egories as fixed (motorbikes, off-	2
Circle one answer. Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?	YES Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.	NO Assign a score of 4 since there are no or no apparent modifications.	NOT SURE [Double check "n none apparent" a "recovered" and score of 3.5	and
Select one or double check adjoining n	umber and average the score.			score
4pts NONE OR NONE APPARENT	. There are no modifications or no	o modifications that are apparent to	the Rater.	
3pts RECOVERED. The wetland a	ppears to have recovered from pa	est modifications.		
2pts RECOVERING. The wetland	appears to be in the process of rea	covering from past modifications		
	'. The modifications have occurre ons, and/or the modifications are of	d, recently occurred, and/or the wetlongoing.	and has not	
	one and assign score. This gues	tion asks the Rater to assign an ove		
	etland is in comparison to other ec	ologically or hydrogeomorphically sine range in quality typical of the regineration		4
This question presumes a good ser state.	etland is in comparison to other ec	ologically or hydrogeomorphically si ne range in quality typical of the regi		4
This question presumes a good ser state. 7pts EXCELLENT. Wetland appea	etland is in comparison to other ecuse of the types of wetlands and the rs to represent the best of its type	ologically or hydrogeomorphically si ne range in quality typical of the regi	on, watershed, or	•

MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.

POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.

FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present

POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.

Metric 4. Habitat Alteration and Development. Maximum 20 points. While hydrology may be the single most important

22

Subtotal

disturbances, successional state, etc. is not good.

4pts

3pts

2pts

1pt

4c.	evalua alterat possib approp scores disturb	ated. The state of	nis question does not at are observed. All a ation. Evaluate wheth core that best describ me instances, the soo The Rater may chec	discriminate between wetle vailable information, field va- ner the alteration is trivial in es the present state of the pres can be viewed as a ha	and visit n re we abita	ls wit s, ae latior tland at alte	al habitat of the type of wetland that is h different types of habitat. Check all rial photos, maps, etc. can be used to to the wetlands overall habitat. Sele. It is appropriate to "double check" all ration continuum, from very high to well disturbances, yet still determine	possible identify a ct the most nd average ery low or no	
С	heck a	all that	are observed pres	ent in or near the wetla	nd				
			Mowing				Herbaceous layer/aquatic bed	d removal	
			Grazing (cattle, s	heep, pigs, etc.)			Sedimentation		
			Clear cutting				Dredging		
			Selective cutting				Farming		
			Woody debris rea	moval			Nutrient enrichment, e.g. nuis	ance algae	
			Toxic pollutants				Other (specify)		
			Shrub/sapling rer	moval			Other (specify)		
Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?			or an intermediate sc	Assign a score 1, 3 or 6, or an intermediate score, depending on degree of ecovery from the		NO Assign a score of 9 since there are no or no apparent modifications.	ssign a score of 9 since ere are no or no apparent Double check none apparen		
						3			cooro
Selec	t one o	r doub	le check adjoining r	number and average the s	sco	re.			score 3
9p	ots N	IONE C	R NONE APPARENT	 Γ. There are no alterations 	or	no al	terations that are apparent to the Rate	er.	
6p	ots F	RECOVI	ERED. The wetland a	appears to have recovered	fro	m pa	st alterations.		
							covering from past alterations/		⊠
1pt RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.									
	re	ecovere	d from past alteration	s/, and/or the alterations/ a	are		ing.		
Metric	c 5. Sp	pecial w	vetland communities	s. Maximum 10 points. A	ssi	gn or	deduct points if wetland has the featuore than 10 points even if multiple ca		
Metric	c 5. S p Re ap	ecial w	vetland communities Narrative Rating for gue.	s. Maximum 10 points. A	\ssi ece	gn or	deduct points if wetland has the featu	tegories are	ots)
	c 5. Sp Re ap Bog	pecial wefer to N	vetland communities Narrative Rating for guest.	s. Maximum 10 points. A	kssi ece	gn or	deduct points if wetland has the featuore than 10 points even if multiple ca	tegories are	ots)
	c 5. Sr Re ap Bog Fen	pecial was a second of the contract of the con	vetland communities Narrative Rating for guest.	s. Maximum 10 points. A	kssi ece	gn or	deduct points if wetland has the featuore than 10 points even if multiple ca	tegories are Openings) (10	,
	Bog Fen Old	pecial wefer to Noplicable (10pts)	vetland communities Narrative Rating for gue.	s. Maximum 10 points. A pidance. No wetland can re	ussi ece	gn or ive m	deduct points if wetland has the feature than 10 points even if multiple catalacter than 10 points and prairies (Oak Relict wet prairies (10 pts)	Openings) (10	species (10pts)
	Bog Fen Old	pecial we fer to Noplicable (10pts) (10 pts) Growth ure For	vetland communities Narrative Rating for gue.) (S) n Forest (10 pts) rested Wetland (5 p	s. Maximum 10 points. A pidance. No wetland can re	Assi ece	gn or live m	deduct points if wetland has the feature than 10 points even if multiple catalled Lake plains sand prairies (Oak Relict wet prairies (10 pts) Known occurrence of threatene	openings) (10 ped/endangered swaterfowl habita	species (10pts)
	Bog Fen Old (pecial we efer to Noplicable (10pts) (10 pts) Growth ure Forestal we	vetland communities Narrative Rating for gue.) (S) n Forest (10 pts) rested Wetland (5 p	s. Maximum 10 points. A pidance. No wetland can restance to the pidance of the pi	Assi ece	gn or	deduct points if wetland has the feature than 10 points even if multiple call Lake plains sand prairies (Oak Relict wet prairies (10 pts) Known occurrence of threateners Significant migratory songbird/	openings) (10 ped/endangered swaterfowl habita	species (10pts)

. . .

Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.

6a.	Wetland Vegetation Communities. Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m ² (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	
	Aquatic Bed. Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed (Lemna spp., spirodelaspp.) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	
	Emergent. Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	2
	Shrub. Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	
	Forested. Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	
	Open water. The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub ₃) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	
	Other (See User's Manual)	

Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community

narrative	description
low	Low species diversity and/or a predominance of non- native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetaion, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

Table 5. Mudflat and open water community cover scale

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more
3	High 4ha (9.88 acres) or more

27

	prizontal (plan view) interspersion. Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as the looking down upon it. See Figure 1.	3
5pts	HIGH. Wetland has a high degree of interspersion	
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersion	
3pts	MODERATE. Wetland has a moderate degree of interspersion	
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersion	
1pt	LOW. Wetland has a low degree of interspersion	
0pts	NONE. Wetland has no plan view interspersion	

6c. Co	verage of Invasive Plant Species. Refer to Table 1 on Page 7 for list. Select only one and assign score.	-1
-5pts	Extensive. >75% areal cover of invasive species	
-3pts	Moderate 25-75% areal cover of invasive species	
-1pt	Sparse. 5-25% areal cover of invasive species	⊠
0pts	Nearly absent. <5% areal cover of invasive species	
1pt	Absent	

6d. Microtopography. Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.								
Vegetated hummocks and tussocks.								
Coarse woody debris >15cm (6in) diameter								
Standing dead trees >25cm (10in) diameter at breast height								
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reprehabitat for from reproduction	oduction, or							

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

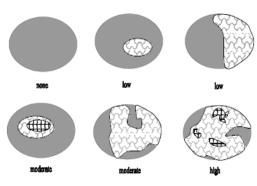


Figure 1. Hypothetical wetlands for estimating degree of interspersion.

29 GRAND TOTAL

End of Quantitative Rating. Complete Categorization Worksheets.

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

ORAM Summary Worksheet

		Circle answer	
		or insert score	Result
Narrative Rating	Question 1: Critical Habitat	☐ YES ☑ NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	☐ YES 🖾 NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	☐ YES 🖾 NO	If yes, Category 3.
	Question 4: Significant bird habitat	☐ YES 🖾 NO	If yes, Category 3.
	Question 5: Category 1 Wetlands		If yes, Category 1
	Questions 6: Bogs		If yes, Category 3.
	Question 7: Fens	☐ YES ☑ NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	☐ YES 🖾 NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	☐ YES ☑ NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	☐ YES 🖾 NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	☐ YES ☑ NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	☐ YES 🖾 NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	☐ YES ☐ NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	☐ YES 🖾 NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1: Size	0	
	Metric 2: Buffers and surrounding land use	4	
	Metric 3: Hydrology	10	
	Metric 4: Habitat	7	
	Metric 5: Special Wetland Communities	0	
	Metric 6: Plant communities, interspersion, microtopography	1	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.state.oh.us/dsw/401/401.html to determine the wetland's category based on its quantitative score	22	Category based on score breakpoints

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

Choices	Circle one		Evaluation				
Did you answer "Yes" to any of the following questions:	☐ YES	⊠ NO	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or				
Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.	Wetland is categorized as a Category 3 wetland		functional assessments to determine if the wetland has been over-categorized by the ORAM				
Did you answer "Yes" to any of the following questions:	☐ YES	⊠ NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a				
Narrative Rating Nos. 1, 8b, 9b, 9e, 11	Wetland should be evaluated for possible Category 3 status		Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland's category.				
Did you answer "Yes" to	☐ YES	⊠ NO	Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland				
Narrative Rating No. 5	Wetland is categorized as a Category 1 wetland		using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been undercategorized by the ORAM				
Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?	 ✓ YES Wetland is assigned to the appropriate category based on the scoring range 	□ NO	If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.				
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	⊠ NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).				
Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	Wetland was under categorized by this method. A written justification for recategorization should be provided on Background Information Form	⊠ NO	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hdrologic function s because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rula 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A ritten justification with supporting reasons or information for this determination should be provided.				
Final Category							

Final Category								
Choose One		☐ Category 2	☐ Category 3					

End of Ohio Rapid Assessment Method for Wetlands

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		uantitative Rating ick - WL-32F-PEM Rater(s): N. Houk Date: 29 Aug 2023
Oile. V	vaveriy L	. Date: 23 Aug 2023
0	0	Metric 1. Wetland Area (size).
max 6 pts.	subtotal	Select one size class and assign score.
4	4	Metric 2. Upland buffers and surrounding land use.
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one and assign score. Do not double check. ☐ WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts) ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts) ☐ NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts) ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Calculate average buffer width. Select only one and assign score. Do not double check. ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7pts) ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5pts) ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts) ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)
10	14	Metric 3. Hydrology.
Max 30 pts.	subtotal	3a. Sources of Water. Score all that apply
7	21	Metric 4. Habitat Alteration and Development.
Max 20pts.	Subtotal	4a. Substrate disturbance. Score one or double-check and average. None or none apparent (4pts) Recovered (3pts) Recovered (2pts) Recent or no recovery (1pts) 4b. Habitat development. Select only one and assign score. Excellent (7pts) Very good (6pts) Good (5pts) Moderately good (4pts) Fair (3pts) Poor to fair (2pts) Poor (pts) 4c. Habitat alteration. Score one or double-check and average.
	21 Subtotal th	None or none apparent (9pts) Recovered (6pts) Mowing Shrub/sapling removal Herbaceous/aquatic bed removal Sedimentation Selective cutting Dredging Woody debris removal Farming Toxic pollutants Nutrient enrichment

Site:	Waverly L	ick - WL-32F-PEM Rater(s):	N. Houk	Date: 29 Aug 2023
	21			
	Subtotal first pa	ge		
0	21	Metric 5. Special wetland	ds.	
Max 10pts	Subtotal	Check all that apply and score as indicated Bog (10pts) Fen (10pts) Old growth forest (10pts) Mature forested wetland (5 pts) Lake Erie coastal/tributary wetland-r Lake Plain Sand Prairies (Oak Open Relict Wet Prairies (10pts) Known occurrence state/federal thre Significant migratory songbird/water Category 1 Wetland. See Question	restricted hydronings) (10pts) eatened or end fowl habitat o	ology (5pts) langered species (10pts) r usage (10pts)
1	22	Metric 6. Plant communit	ties, int	erspersion, micro topography
Max 20 pts.	Subtotal	6a. Wetland Vegetation Communities		on Community Cover Scale
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
		Aquatic Bed 2 Emergent	1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
		Shrub	2	Present and either comprises significant part of wetland's vegetation and is
		Forest		of moderate quality or comprises a small part and is of high quality
		Mudflats	3	Present and comprises significant part, or more of wetland's vegetation
		Open Water Other .		and is of high quality
		Other		
		6b. Horizontal (plan view) Interspersion	Narrative	Description of Vegetation Quality
		Select only one. ☐ High (5pts)	low	Low spp diversity and/or predominance of nonnative or disturbance Tolerant native species
		☐ Moderately high (4pts) ☐ Moderate (3pts) ☑ Moderately low (2pts) ☐ Low (1pts)	mod	Native spon are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
		None (0pts)Coverage of invasive plants. Refer to	high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp
		Table 1 ORAM long form for list.	NA 10 4	10 W 10 0 10
		Add or deduct points for coverage Extensive >75% cover (-5pts)	Mudflat a	nd Open Water Class Quality Absent <0.1ha (0.247 acres)
		☐ Extensive >75% cover (-5pts) ☐ Moderate 25-75% cover (-3pts)	1	Low 0.1 to <1ha (0.247 to 2.47)
		☐ Sparse 5-25% cover (-1)	2	Moderate 1 to <4ha (2.47 to 9.88 acres)
		☐ Nearly absent >5% cover (0pts)	3	High 4ha (9.88 acres) or more
		☐ Absent (1pts)	N4: 4	agraphy Cover Coole
		6d. Micro topography	Micro top 0	ography Cover Scale Absent
		Score all present using 0 to 3 scale.	1	Present very small amounts or if more common of marginal quality
		Vegetated hummocks/tussocks	2	Present in moderate amounts, but not of highest quality or
		Coarse woody debris >15cn (6in)		In small amounts of highest quality
		Standing dead >25cm (10in) dbh Amphibian breeding pools	3	Present in moderate or greater amounts and of highest quality

GRAND TOTAL (max 100 pts)

Quantitative Rating

Metric 1. Wetland area (max 6pts). Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

score

6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	
0pts	<0.1 acres (0.04ha)	0

Table 2. Metric to English conversion table with visual estimation sizes

acres	ft ²	yd²	ft on side	yd on side	ha	m²	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points. Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

score

b) 10 us	verage Buffer Width (abw). Calculate the average buffer width and select only one score. To calculate abw, estimate uffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 00m, 25m, 10m and 0m would be calculated as follows: abw = $(50m + 25m + 10m + 0m)/4 = 21.25m$. Intensive land sees are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced asture, etc.		1
7pts	WIDE. >50m (164ft) or more around perimeter		
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter		
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	\boxtimes	
0pts	VERY NARROW. <10m (<32ft) around perimeter.		
	ntensity of predominant surround land use(s). Select one, or double check up to two and average score, for the itensity of the predominant land use(s) outside the wetland's buffer zone (if any).		3
7pts	VERY LOW. 2 nd growth or older forest, prairie, savannah, wildlife area, etc.		
5pts	LOW. Old field (>10 yrs), shrubland, young 2 nd growth forest, etc.		•
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.		•
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.		<u> </u>

4

Metric 3. Hydrology Maximum 30 points. This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity. A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

than 30 points. score Sources of Water. Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values. 4 High pH groundwater (7.5-9.0) 5pts 3pts Other groundwater 1pt Precipitation \boxtimes \boxtimes 3pts Seasonal surface water Perennial surface water (lake or stream) 5pts Connectivity. Select all that apply and sum score 0 100-year floodplain. "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used. Between stream/lake and other human land use. This question asks whether the wetland is located between a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses Part of wetland or upland (e.g. forest, prairie) complex. Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply. Part of riparian or upland corridor. See description above. 1pt Maximum water depth. Select only one and assign score. The Rater does not need to actually observe the wetland when its water depth is greates in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question. 1 3pts >0.7m (27.6in) 0.4 to 0.7m (15.7 to 27.6in) \boxtimes 1pt <0.4m (<15.7in) Duration of inundation/saturation. Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally 2 Semi permanently to permanently inundated or saturated. 4nts 3pts Regularly inundated or saturated. \boxtimes Seasonally inundated. 2pts

7

П

Subtotal

Seasonally saturated in the upper 30cm (12in) of soil.

3e.	e. Modifications to natural hydrologic regime. Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.							
	It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (Chamaedaphne calyculata) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to that type of wetland. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.							
	cate	egory to describe the present sta	ole past and ongoing disturbances, ate of the wetland. In instances whis uncertain as to which category i	here th	e Rater believes that a wetland	falls between		
	The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance. The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic							
		k all that are observed prese	etric 4 where these same distur	bance	s may be nabitat aiterations.			
Г	П	ditch(es), in or near the we		П	point source discharges to	the (non-storm	water)	
		tile(s), in or near the wetlar		filing/grading activities in or near th				
		dike(s), in or near the wetla			road beds/RR beds in or r	near the wetland		
H		weir(s), in or near the wetla			dredging activities in or ne			
-		storm water inputs (additio			other (specify)			
		Storm water inputs (addition	ir or water)	Ш	other (specify)			
Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?		rbances identified above or appear to have caused in trivial alterations to the s natural hydrologic or have they occurred so past that current y should be considered to	YES Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	NO Assign a score of 12 since there are no or no apparent modifications.		NOT SURE Double check "none or none apparent" and "recovered" and assign a score of 9.5		
De	Hatui	al !	3					
Sele	ct on	e or double check adjoining n	umber and average the score.			ı	score	
12	2pts	NONE OR NONE APPARENT	. There are no modifications or no	o modi	fications that are apparent to the	e Rater.		
7	7pts	RECOVERED. The wetland a	ppears to have recovered from pa	st mod	lifications.			
3	3pts RECOVERING. The wetland appears to be in the process of recovering from past modifications							

RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.

10

Metric 4. Habitat Alteration and Development. Maximum 20 points. While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.								
4;	the des loca Exa road	soil and surface substrates of the criptive but not controlling. In so- ations on a disturbance continuous imples of substrate/soil disturba	ne wetland. Note also that the laborie instances, it may be more aport, from very high to very low or note include filling and grading, plo	ge. This question evaluates physically on the scoring categories are interpropriate to consider the scoring cate of disturbance. In the scoring cate of the scoring cate of the scoring cate of the scoring cate of the scoring categories.	ended to be egories as fixed (motorbikes, off-			
	of soil caused caused alterat natura have the past the should	Circle one answer. Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"? YES Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance. NO Assign a score of 4 since there are no or no apparent modifications. POURE NOT SURE Double check "none apparent modifications." "recovered" and score of 3.5						
s	elect on	e or double check adjoining n	umber and average the score.			score 2		
	4pts	NONE OR NONE APPARENT	. There are no modifications or ne	o modifications that are apparent to	the Rater.			
	3pts	RECOVERED. The wetland a	ppears to have recovered from pa	ast modifications.				
	2pts	RECOVERING. The wetland	appears to be in the process of re	covering from past modifications				
	1pt		 The modifications have occurre ons, and/or the modifications are 	d, recently occurred, and/or the wetlongoing.	and has not			
4b. Habitat development. Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.								
	7pts	EXCELLENT. Wetland appea	rs to represent the best of its type	or class.				
	6pts	VERY GOOD. Wetland appear would make it excellent.	ars to be a very good example of it	ts type or class but is lacking in char	acteristics, which			
	5pts	GOOD. Wetland appears to b successional state, or other re		ass but because of past or present d	listurbances,			
	4pts	MODERATELY GOOD. Wetla	and appears to be a fair to good ex	xample of its type or class.				
	3pts	FAIR. Wetland appears to be disturbances, successional sta		type or class but because of past or	rpresent			
	2pts	POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.				×		

POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.

14

4c. Habitat alteration. This question evaluates the "intactness" the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to "double check" and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.										
С	Check all that are observed present in or near the wetland									
			Mowing				Herbaceous layer/aquatic bed	quatic bed removal		
			Grazing (cattle, s	sheep, pigs, etc.)			Sedimentation			
			Clear cutting				Dredging			
			Selective cutting				Farming			
			Woody debris rer	moval			Nutrient enrichment, e.g. nuisa	ance algae		
			Toxic pollutants				Other (specify)			
			Shrub/sapling rer	moval			Other (specify)			
Circle one answer. Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?			identified above to have caused alterations to the hydrologic ney occurred so t current	Assign a score 1, 3 or 6, or an intermediate score,		th	Ssign a score of 9 since sere are no or no apparent sodifications.	NOT SURE Double check none apparen "recovered" a score of 7.5	t" and	
Selec	t one o	r doub	le check adjoining n	number and average the s	score.				score 3	
9p	ts N	IONE C	R NONE APPARENT	T. There are no alterations	or no a	altera	ations that are apparent to the Rate	r.		
6р	ts R	ECOVI	ERED. The wetland a	appears to have recovered	from pa	ast a	Iterations.			
3р							ering from past alterations/			
1				 The alterations/ have oc s/, and/or the alterations/ a 			ently occurred, and/or the wetland h	nas not		
Metric 5. Special wetland communities. Maximum 10 points. Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.										
	Bog (10pts)					ots)				
	Fen (10 pts) Relict wet prairies (10 pts)									
□ Old Growth Forest (10 pts) □ Known occurrence of threatened/endangered spec			pecies (10pts)							
☐ Mature Forested Wetland (5 pts) ☐ Significant migratory songbird/waterfowl habitat (10					t (10 pts)					
	☐ Coastal wetlands, unrestricted hydrology (10 pts) ☐ Category 1 wetlands (See Narrative Rating #5) (-10 pts)					(-10 pts)				
	☐ Coastal wetlands, restricted hydrology (5 pts)									

Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.

6a.	Wetland Vegetation Communities. Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m ² (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	
	Aquatic Bed. Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed (Lemna spp., spirodelaspp.) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	
	Emergent. Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	2
	Shrub. Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	
	Forested. Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	
	Open water. The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub ₃) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	
	Other (See User's Manual)	

Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.

Cover	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community

narrative	description
low	Low species diversity and/or a predominance of non- native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetaion, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

Table 5. Mudflat and open water community cover scale

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

23

	6b. Horizontal (plan view) interspersion. Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.					
5pts	HIGH. Wetland has a high degree of interspersion					
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersion					
3pts	MODERATE. Wetland has a moderate degree of interspersion					
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersion					
1pt	LOW. Wetland has a low degree of interspersion					
0pts	NONE. Wetland has no plan view interspersion					

6c. Co	verage of Invasive Plant Species. Refer to Table 1 on Page 7 for list. Select only one and assign score.	-3
-5pts	Extensive. >75% areal cover of invasive species	
-3pts	Moderate 25-75% areal cover of invasive species	
-1pt	Sparse. 5-25% areal cover of invasive species	
0pts	Nearly absent. <5% areal cover of invasive species	
1pt	Absent	

6d. Microtopography. Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.	0
Vegetated hummocks and tussocks.	
Coarse woody debris >15cm (6in) diameter	
Standing dead trees >25cm (10in) diameter at breast height	
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction	

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

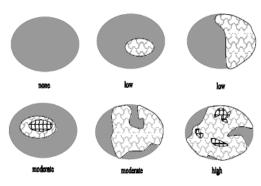


Figure 1. Hypothetical wetlands for estimating degree of interspersion.

22 GRAND TOTAL

End of Quantitative Rating. Complete Categorization Worksheets.

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

APPENDIX E

HHEI FORMS



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

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		ONG. RIVE		VER MILE !
OATE 08/29/23 SCORER N. Houk				
NOTE: Complete All Items On This Form	a - Refer to "Field E	valuation Manual for O	hio's PHWH Streams	s" for Instruction
STREAM CHANNEL NONE / NAT	URAL CHANNEL	RECOVERED RECO	VERING RECENT	OR NO RECOVERY
SUBSTRATE (Estimate percent of eve	ry type of substrate p	resent. Check ONLY two p	redominant substrate TY	/PE boxes & B. HH
(Max of 32). Add total number of significa	ant substrate types fou ERCENT TYPE		PERC	ENT Met
BLDR SLABS [16 pts]	0%	SILT [3 pt]	10	% Poi
BOULDER (>256 mm) [16 pts]	0%	LEAF PACK/WOODY I	00	Cuba
BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts]	20%	FINE DETRITUS [3 pt CLAY or HARDPAN [0	3]	Max
GRAVEL (2-64 mm) [9 pts]	30%	MUCK [0 pts]	10%	20
SAND (<2 mm) [6 pts]	30%	ARTIFICIAL [3 pts]	09	6 2
Total of Percentages of 2	20.00% ^(A)	100	% (B) A +
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBS	TRATE TYPES: 15	TOTAL NUMBER	OF SUBSTRATE TYPE	s: 5
Maximum Pool Depth (Measure the m	aximum pool depth w	ithin the 61 meter (200 ft)	evaluation reach at the t	time of Pool I
evaluation. Avoid plunge pools from road > 30 centimeters [20 pts]	d culverts or storm water	er pipes) (Check ONLY of > 5 cm - 10 cm [15 pt		Max
> 22.5 - 30 cm [30 pts]		< 5 cm [5 pts]	OT OLIANINE! [0 -4-1	0.1
> 10 - 22.5 cm [25 pts]		NO WATER OR MOI	ST CHANNEL [U pts]	2
COMMENTS		MAXIMUM PO	OL DEPTH (centimeters	s):
3. BANK FULL WIDTH (Measured as the	average of 3-4 meass	urements) (Check	ONLY one box):	Ban
> 4.0 meters (> 13') [30 pts]	,	> 1.0 m - 1.5 m (> 3' 3		Wid Max
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	L	≤ 1.0 m (<=3' 3") [5 pt	sį	IVIAX
		AVEDACE DA	NKFULL WIDTH (meters	s): 20
COMMENTS		AVERAGE BAI	NKFULL WID IT (meter	s):
	This informa	ition must also be comple	ted	
RIPARIAN ZONE AND FLOODP	LAIN QUALITY	ation must also be comple NOTE: River Left (L) and F		nstream 🏗
RIPARIAN WIDTH	PLAIN QUALITY \$\frac{1}{2}\$	NOTE: River Left (L) and FALITY		nstream ជំ
	PLAIN QUALITY FLOODPLAIN QUA L R (Most Pre Mature F	NOTE: River Left (L) and F ALITY edominant per Bank) orest, Wetland	Right (R) as looking dowr	
RIPARIAN WIDTH L R (Per Bank)	PLAIN QUALITY FLOODPLAIN QUA L R (Most Pre Mature F Immature	NOTE: River Left (L) and FALITY edominant per Bank)	Right (R) as looking dowr	ion Tillage
RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m	FLOODPLAIN QUALITY FLOODPLAIN QUALITY L R (Most Property Mature Filed)	NOTE: River Left (L) and FALITY edominant per Bank) orest, Wetland Forest, Shrub or Old	Right (R) as looking dowr	ion Tillage
RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	FLOODPLAIN QUALITY FLOODPLAIN QUALITY L R (Most Pre Mature Field Resident	k NOTE: River Left (L) and FALITY edominant per Bank) orest, Wetland e Forest, Shrub or Old ial, Park, New Field	Right (R) as looking dowr	ion Tillage ndustrial
RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m	FLOODPLAIN QUALITY FLOODPLAIN QUALITY L R (Most Property Mature Filed)	k NOTE: River Left (L) and FALITY edominant per Bank) orest, Wetland e Forest, Shrub or Old ial, Park, New Field	Right (R) as looking dowr	ion Tillage ndustrial ture, Row Crop
RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS	FLOODPLAIN QUALITY FLOODPLAIN QUALITY L R (Most Pre Mature F Immature Field Resident Fenced F	RNOTE: River Left (L) and FALITY edominant per Bank) orest, Wetland e Forest, Shrub or Old ial, Park, New Field Pasture	Right (R) as looking dowr	ion Tillage ndustrial ture, Row Crop
RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval	FLOODPLAIN QUALITY FLOODPLAIN QUALITY L R (Most Pre Mature F Immature Field Resident Fenced F Fuluation) (Check ONL)	ANOTE: River Left (L) and FALITY edominant per Bank) orest, Wetland a Forest, Shrub or Old ial, Park, New Field Pasture Y one box): Moist Channe	Right (R) as looking dowr Right (R) as looking dowr Conservat Urban or Ir Open Past Mining or Conservat I, isolated pools, no flow	ion Tillage ndustrial ture, Row Crop Construction
RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eva	FLOODPLAIN QUALITY FLOODPLAIN QUALITY L R (Most Pre Mature F Immature Field Resident Fenced F Fuluation) (Check ONL)	ANOTE: River Left (L) and FALITY edominant per Bank) orest, Wetland a Forest, Shrub or Old ial, Park, New Field Pasture Y one box): Moist Channe	Right (R) as looking dowr	ion Tillage ndustrial ture, Row Crop Construction
RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation Subsurface flow with isolated poor COMMENTS_	FLOODPLAIN QUALITY FLOODPLAIN QUALITY L R (Most Pre Mature F Immature Field Resident Fenced F Fuluation) (Check ONL) Ols (Interstitial)	ANOTE: River Left (L) and FALITY edominant per Bank) orest, Wetland e Forest, Shrub or Old ial, Park, New Field Pasture Y one box): Moist Channe Dry channel, r	Right (R) as looking dowr L R Conservat Urban or In Open Past Mining or O	ion Tillage ndustrial ture, Row Crop Construction
RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation Subsurface flow with isolated pool	FLOODPLAIN QUALITY FLOODPLAIN QUALITY L R (Most Pre Mature F Immature Field Resident Fenced F Fuluation) (Check ONL) ols (Interstitial) per 61 m (200 ft) of chall	ANOTE: River Left (L) and FALITY edominant per Bank) orest, Wetland e Forest, Shrub or Old ial, Park, New Field Pasture Yone box): Moist Channe Dry channel, r	Right (R) as looking dowr L R Conservat Urban or In Open Past Mining or 0 I, isolated pools, no flow no water (Ephemeral) DX): 3.0	ion Tillage ndustrial ture, Row Crop Construction
RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation Subsurface flow with isolated poor COMMENTS SINUOSITY (Number of bends poor Comments)	FLOODPLAIN QUALITY FLOODPLAIN QUALITY L R (Most Pre Mature F (Most P	ANOTE: River Left (L) and FALITY edominant per Bank) orest, Wetland a Forest, Shrub or Old ial, Park, New Field Pasture Y one box): Moist Channe Dry channel, r	Right (R) as looking dowr Right (R) as looking dowr Conservat Urban or In Open Past Mining or O I, isolated pools, no flow no water (Ephemeral)	ion Tillage ndustrial ture, Row Crop Construction
RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation Stream Flowing Subsurface flow with isolated poor COMMENTS SINUOSITY (Number of bends poor None)	FLOODPLAIN QUALITY FLOODPLAIN QUALITY L R (Most Pre Mature F Immature Field Resident Fenced F Fuluation) (Check ONL) ols (Interstitial) per 61 m (200 ft) of chall	ANOTE: River Left (L) and FALITY edominant per Bank) orest, Wetland e Forest, Shrub or Old ial, Park, New Field Pasture Y one box): Moist Channe Dry channel, r	Right (R) as looking dowr L R Conservat Urban or Ir Open Past Mining or 0 I, isolated pools, no flow no water (Ephemeral) 0x): 3.0 >3	ion Tillage ndustrial ture, Row Crop Construction

ADDITIONAL STREAM INFORMATION (This I	nformation Must Also be Completed):		
QHEI PERFORMED? - Yes 🗸	No QHEI Score (If Yes, A	tach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE	'S)		
WWH Name:		Distance from Evaluated Stream	
CWH Name: _	Metalet Nechaliferronalisassist socialistics (Nechaliferren)	Distance from Evaluated Stream	1_
EWH Name:		Distance from Evaluated Stream	1
MAPPING: ATTACH COPIES OF MAP	S, INCLUDING THE ENTIRE WATERSHI	ED AREA. CLEARLY MARK THE SITE	LOCATION
USGS Quadrangle Name:	NRCS Soil Map		am Order
County: Pike	Township / City: Wave	erly	
MISCELLANEOUS	The second secon		
Base Flow Conditions? (Y/N): Y Date of	last precipitation:	Quantity: 0.00	
Photograph Information:			
Elevated Turbidity? (Y/N): N Canop	oy (% open): 0%		
Were samples collected for water chemistry? (Y.	/N): N (Note lab sample no. or id	. and attach results) Lab Number:	
Field Measures: Temp (°C) Dissolve	ed Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)	
Is the sampling reach representative of the stream	nm (Y/N) Y If not, please explain:_		
Additional comments/description of pollution imp	pacts:	EDF and the constraint of the	
Fish Observed? (Y/N) Voucher? (Y/N)	l observations. Voucher collections option de appropriate field data sheets from the P N Salamanders Observed? (Y/N) her? (Y/N) Aquatic Macroinvertebr	rimary Headwater Habitat Assessment Voucher? (Y/N)	Manual)
DRAWING AND NARRATIV	E DESCRIPTION OF STREAM	REACH (This <u>must</u> be comp	leted):
Include important landmarks and other f	eatures of interest for site evaluation a	and a narrative description of the str	eam's location
	Row	- Acces Rod	
	1.16.315	R HOW	
FLOW -	AT THE PER PER PER PER PER PER PER PER PER PE	* 1 X	
	WL 32F- TOK 1	308	T-52-INT
	Row		



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

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49	

SITE NAME/LOCATION Waverly Lick	4
SITE NUMBER ST-32-INT RIVER BASIN DRAINAGE AREA (mi²)	0.06
LENGTH OF STREAM REACH (ft) LAT. LONG. RIVER CODE RIVER MILE L	
DATE 08/29/23 SCORER N. Houk COMMENTS	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PhWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PhWH Streams of the Complete All Items On This Evaluation Manual for Ohio's PhWH Streams of the Complete All Items On This Evaluat	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	COVERY
SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHE
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metr
BLDR SLABS [16 pts] 0% SILT [3 pt] 20%	Poin
BOULDER (>256 mm) [16 pts]	Substr
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 20%	Max =
GRAVEL (2-64 mm) [9 pts] 30% MUCK [0 pts] 0%	19
SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] 0% I	15
Total of Percentages of 0.00% (A) 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool De
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Wax -
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	45
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	15
COMMENTS MAXIMUM POOL DEPTH (centimeters):	-
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankf
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m (> 3' 3" - 4' 8") [15 pts] < 1.0 m (<=3' 3") [5 pts]	Width Max=3
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	-
COMMENTS AVERAGE BANKFULL WIDTH (meters):	15
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Immature Forest. Shrub or Old	
Moderate 5-10m Field Urban or Industrial Open Pasture, Row Ci	ron
Narrow <5m Residential, Park, New Field	ф
None Fenced Pasture Mining or Construction COMMENTS	17
	-
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermitten)	t)
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS_	L
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
None 1.0 2.0 3.0 3.0 5 1.5 2.5 3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate Moderate (2 ft/100 ft) Moderate to Severe	100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also	be Completed):		
QHEI PERFORMED? - Yes 🗸 No QHEI Score	(If Yes, Attach Completed QHEI Form)		
DOWNSTREAM DESIGNATED USE(S)			
WWH Name:	_ Distance from Evaluated Stream		
CWH Name:EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream		
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE EF	ITIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION		
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order		
County: Pike Towns	ship / City: Waverly		
MISCELLANEOUS			
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00		
Photograph Information:			
Elevated Turbidity? (Y/N): N Canopy (% open): 0%	b l		
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:			
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)			
Is the sampling reach representative of the stream (Y/N) If not, please explain:			
Additional comments/description of pollution impacts:			
Additional confinents/description of policiton impacts.			
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/			
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This must be completed):		
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location			
FLOW 32F-PEIN 32F-FEIN ROW	ST-32. INT		

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

12/12/2023 4:00:47 PM

in

Case No(s). 23-1044-EL-BLN

Summary: Letter of Notification Waverly - Lick Relocation. electronically filed by Hector Garcia-Santana on behalf of Ohio Power Company.