



Photo 5. ROW Corridor, Emergent Wetland Vegetation, facing North.



Photo 6. ROW Corridor, Scrub Shrub Vegetation, facing East.



Photo 7. ROW Corridor, Pond, facing Northeast.



Photo 8. ROW Corridor, Fallow Field Vegetation, facing West.



Photo 9. ROW Corridor, Fallow Field Vegetation, facing West.



Photo 10. ROW Corridor, Stream, facing Northeast.

Nationwide Permit (NWP) 12 Application and  
Pre-Construction Notification (PCN)  
F7581/F7582/F5689 - 138kV Garver Substation TLoop and  
Garver to AK Steel-138kV

## APPENDIX

# B

CORRESPONDENCE WITH TNC  
REGARDING IN-LIEU- FEE  
MITIGATION CREDITS



The Nature Conservancy in Ohio  
6375 Riverside Drive, Suite 100  
Dublin, OH 43017-5045

Office: (614)717-2770  
Cell: (513)324-7363  
[www.nature.org/ohiomitigationprogram](http://www.nature.org/ohiomitigationprogram)

**Ohio Stream and Wetland In-Lieu Fee Mitigation Program**  
**LETTER OF CREDIT AVAILILTY AND RESERVATION**

January 2, 2019

Cori Jansig  
Cardno  
11121 Canal Road  
Cincinnati, Ohio 45241

Re: Garver Substation (F7581/F7582/F5689-138kV)

Dear Cori:

This letter confirms that The Nature Conservancy has wetland mitigation credits available for Duke Energy to purchase in the 05080002 8-digit HUC watershed (Lower Great Miami). TNC will reserve 1.7 wetland credits for the Purchaser in this watershed at a cost of \$56,000 per credit, for a period of 90 days from the date of this letter specifically for Garver Substation project. After that time, the Purchaser may request an extension of this reservation, but there is no guarantee of availability beyond this date. If TNC approves the extension, a new Letter of Credit Availability and Reservation will be issued.

This letter does not document payment for impacts. The Conservancy does not assume liability for the above mentioned impacts through this correspondence.

When the applicant is ready to submit payment for the above-mentioned credits, please submit the completed Final Credit Request Form and Conflict of Interest Disclosure Form, along with the payment written out to "Ohio Water Development Authority". Mail both the form and the check to Devin Schenk at the address shown in the above letterhead.

Sincerely,

Devin Schenk  
Mitigation Program Manager

Nationwide Permit (NWP) 12 Application and  
Pre-Construction Notification (PCN)  
F7581/F7582/F5689 - 138kV Garver Substation TLoop and  
Garver to AK Steel-138kV

## APPENDIX

# C

USFWS COORDINATION (RTE)  
CULTURAL AND HISTORIC



# Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

**Office of Real Estate**  
*Paul R. Baldrige, Chief*  
2045 Morse Road – Bldg. E-2  
Columbus, OH 43229  
*Phone: (614) 265-6649*  
*Fax: (614) 267-4764*

January 25, 2019

Danielle Thompson  
Cardno  
11121 Canal road  
Cincinnati, Ohio 45241

**Re:** 18-1317; Duke Energy F7581, F7582, F5689 - 138kV Garver Substation

**Project:** The proposed project involves the removal and replacement of approximately 0.49 miles of existing transmission line (3 lines total) as well as create approximately 0.59 miles of new transmission line.

**Location:** The proposed project is located in Middletown, Butler 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:** The Natural Heritage Database has no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no other records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. 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. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

**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 range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees to include: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the rayed bean (*Villosa fabalis*), a state endangered and federally endangered mussel, and the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet fields and meadows. Due to the location and the type of habitat present at the project site, and within the vicinity of the project area, this project is not likely to impact this species.

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

The project is within the range of the Sloan's crayfish (*Orconectes sloanii*), a state threatened species. Due to the location, and that there is no in-water work proposed, this project is not likely to impact this species.

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

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

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

[http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List\\_8\\_16.pdf](http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf)

ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at (614) 265-6397 or [Sarah.Tebbe@dnr.state.oh.us](mailto:Sarah.Tebbe@dnr.state.oh.us) if you have questions about these comments or need additional information.

John Kessler  
Environmental Services Administrator



## Cori Jansing

---

**From:** susan\_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>  
**Sent:** Monday, November 19, 2018 12:00 PM  
**To:** Danielle Thompson  
**Cc:** nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us  
**Subject:** Duke Energy F581/F7582/F5689 - 138 kV Garver Substation, Cincinnati, Hamilton Co.



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



TAILS# 03E15000-2019-TA-0297

Dear Ms. Thompson,

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

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

**FEDERALLY LISTED SPECIES COMMENTS:** All projects in the State of Ohio lie within the range of the federally endangered **Indiana bat** (*Myotis sodalis*) and the federally threatened **northern long-eared bat** (*Myotis septentrionalis*). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags  $\geq 3$  inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves and abandoned mines.

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

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

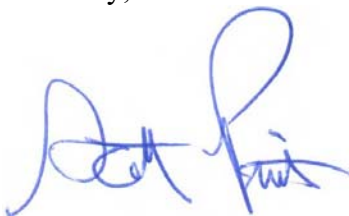
If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend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

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

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

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

Sincerely,



Scott Pruitt  
Acting Field Office Supervisor

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

Nationwide Permit (NWP) 12 Application and  
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## APPENDIX

# D

### CULTURAL AND HISTORIC RESOURCES – LITERATURE REVIEW

The F7581/F7582/F5689—138kV Garver Substation TLoop and Garver to AK Steel-138kV Cultural Resources Literature Reviews are not being made publically available.

**Attachment E**

**Agency Coordination Letters**



# Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

**Office of Real Estate**  
*Paul R. Baldrige, Chief*  
2045 Morse Road – Bldg. E-2  
Columbus, OH 43229  
*Phone: (614) 265-6649*  
*Fax: (614) 267-4764*

January 25, 2019

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John Kessler  
Environmental Services Administrator

## Cori Jansing

---

**From:** susan\_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>  
**Sent:** Monday, November 19, 2018 12:00 PM  
**To:** Danielle Thompson  
**Cc:** nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us  
**Subject:** Duke Energy F581/F7582/F5689 - 138 kV Garver Substation, Cincinnati, Hamilton Co.



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



TAILS# 03E15000-2019-TA-0297

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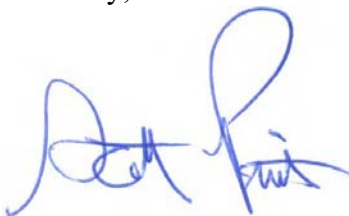
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If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or [ohio@fws.gov](mailto:ohio@fws.gov).

Sincerely,



Scott Pruitt  
Acting Field Office Supervisor

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

## **Attachment F**

# **Regulated Waters Delineation Report**

# Regulated Waters Delineation Report

F7581/F7582/F5689 – 138kV Garver Substation  
TLoop

Middletown, Butler County, Ohio

January 17, 2019



## Document Information

**Prepared for** Duke Energy  
**Client Contact** Kate Keck (Duke Energy)  
**Project Name** F7581/F7582/F5689 – 138kV Garver Substation TLoop  
**Project Number** Cardno #J156720M76  
Duke # M170053  
**Project Manager** Cori Jansing  
**Date** January 17, 2019

Prepared for:



Duke Energy  
139 E. 4th Street, Cincinnati, Ohio 45202

Prepared by:



Cardno  
11121 Canal Road, Cincinnati, Ohio 45241

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## Acronyms

|      |  |
|------|--|
| APA  | Administrative Procedure Act                 |
| BF   | Bank Full                                    |
| CFR  | Code of Federal Regulations                  |
| CWA  | Clean Water Act                              |
| DBH  | Diameter at Breast Height                    |
| DP   | Data Point                                   |
| EPA  | U.S. Environmental Protection Agency         |
| ETR  | Endangered, Threatened, and Rare             |
| FAC  | Facultative Plant                            |
| FACU | Facultative Upland Plant                     |
| FACW | Facultative Wetland Plant                    |
| FEMA | Federal Emergency Management Agency          |
| FIRM | Flood Insurance Rate Map                     |
| GIS  | Geographical Information System              |
| MS4  | Municipal Separate Storm Water Sewer Systems |

|          |   |
|----------|---|
| NHD      | National Hydrography Dataset  |
| NPDES    | National Pollutant Discharge Elimination System                       |
| NRCS     | U.S. Department of Agriculture Natural Resources Conservation Service |
| NWP      | Nationwide Permit   |
| NWPL     | National Wetland Plant List   |
| OBL      | Obligate Wetland Plant  |
| OEPA     | Ohio Environmental Protection Agency                                  |
| ODNR-DOW | Ohio Department of Natural Resources Division of Wildlife             |
| OHWM     | Ordinary High Water Mark  |
| PEM      | Palustrine Emergent Wetland   |
| PFO      | Palustrine Forested Wetland   |
| PLSS     | Public Land Survey Section  |
| PSS      | Palustrine Shrub Scrub Wetland  |
| RGP      | Regional General Permit   |
| SNE      | Significant Nexus   |
| SWANCC   | Solid Waste Agency of Northern Cook County                            |
| TNW      | Traditional Navigable Water   |
| TOB      | Top of Bank   |
| UPL      | Upland Plant  |
| USDA     | U.S. Department of Agriculture  |
| USGS     | U.S. Geological Survey  |
| USACE    | U.S. Army Corps of Engineers  |
| USFWS    | U.S. Fish and Wildlife Service  |
| WOTUS    | Waters of the United States   |
| WQC      | Water Quality Certification   |

# 1 Introduction

Cardno was contracted to perform a water resource inventory, including wetlands and streams, which are located at the F7581/F7582/F5689 – 138kV Garver Substation TLoop project in Middletown, Butler County, Ohio. This field investigation was performed on November 7, 2018. Table 1-1 summarizes the location of the project based on the Public Land Survey Section (PLSS) data.

**Table 1-1 PLSS within the F7581/F7582/F5689 – 138kV Garver Substation TLoop Study Area**

| Township | Range | Section |
|----------|-------|---------|
| 2E       | 4N    | 7       |

The total size of the Study Area was approximately 11.58 acres. The Study Area consisted of a mix of habitats including secondary growth deciduous forest, forested wetland, emergent wetland, scrub shrub, and fallow field.

This report identifies the jurisdictional status of the Study Area based on Cardno’s best professional understanding and interpretation of the *Corps of Engineers’ Wetland Delineation Manual* (Environmental Laboratory, 1987) and U.S. Army Corps of Engineers’ (USACE) guidance documents and regulations. Jurisdictional determinations for other “waters of the U.S.” were made based on definitions and guidance found in 33 CFR 328.3, USACE Regulatory Guidance Letters, and the wetland delineation manual. The USACE administers Section 404 of the Clean Water Act (CWA), which regulates the discharge of fill or dredged material into all “waters of the U.S.,” and is the regulatory authority that must make the final determination as to the jurisdictional status of the Study Area.

## 2 Regulatory Definitions

### 2.1 Waters of the United States

“Waters of the U.S.” are within the jurisdiction of the USACE under the CWA. “Waters of the U.S.” is a broad term, which includes waters that are used or could be used for interstate commerce. This includes wetlands, ponds, lakes, territorial seas, rivers, tributary streams including any definable intermittent waterways, and some ditches below the ordinary high water mark (OHWM). Also included are manmade water bodies such as quarries and ponds, which are no longer actively being mined or constructed and are connected to other “waters”. Wetlands, mudflats, vegetated shallows, riffle and pool complexes, coral reefs, sanctuaries, and refuges are all considered special aquatic sites which involve more rigorous regulatory permitting requirements. A specific, detailed definition of “waters of the U.S.” can be found in the Federal Register (33 CFR 328.3).

On January 9, 2001, the U.S. Supreme Court issued a decision, *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers* (No. 99-1178). The decision reduced the regulation of isolated wetlands under Section 404 of the CWA, which assigned the USACE authority to issue permits for the discharge of dredge or fill material into “waters of the U.S.”. Prior

to the SWANCC decision, the USACE had adopted a regulatory definition of "waters of the U.S." that afforded federal protection for almost all of the nation's wetlands. The Supreme Court decision interpreted that the USACE's jurisdiction was restricted to navigable waters, their tributaries, and wetlands that are adjacent to these navigable waterways and tributaries. The decision leaves the majority of "isolated" wetlands unregulated by the CWA. Therefore, most wetlands that are not adjacent to, or contiguous with, any other "waters of the U.S." via a surface drain such as a swale, ditch, or stream are considered isolated and thus no longer jurisdictional by the USACE.

On June 19, 2006, the U.S. Supreme Court issued decisions in regards to John A. Rapanos v. United States (No. 04-1034) and June Carabell v. United States (04-1384), et al. The plurality decision created two 'tests' for determining CWA jurisdiction: the permanent flow of water test (set out by Justice Scalia) and the "significant nexus" test (set out by Justice Kennedy). On June 5, 2007 the USACE and U.S. Environmental Protection Agency (EPA) issued joint guidance on how to interpret and apply the Court's ruling. According to this guidance, the USACE will assert jurisdiction over traditionally navigable waters, adjacent wetlands, and non-navigable tributaries of traditionally navigable waters that have "relatively permanent" flow, and wetlands that border these waters, regardless of whether or not they are separated by roads, berms, and similar barriers. In addition, the USACE will use a case-by-case "significant nexus" analysis to determine whether waters and their adjacent wetlands are jurisdictional. A "significant nexus" can be found where waters, including adjacent wetlands, alter the physical, biological, or chemical integrity of the traditionally navigable water based on consideration of several factors.

In January 2015 an EPA sponsored publication, *Connectivity of Streams & Wetlands to Downstream Waters: A Review & Synthesis of the Scientific Evidence* (EPA, 2015), emphasized how streams, nontidal wetlands, and open waters in and outside of riparian areas and floodplains effect downstream waters such as rivers, lakes, estuaries, and oceans.

On May 27, 2015 the EPA released a statement that a new Clean Water Rule typically referred to as, "The Waters of the United States (WOTUS) Rule" was finalized and that it would "not create any new permitting requirements and maintains all previous exemptions and exclusions" (epa.gov). The rule would only protect waters that have historically been covered by the Clean Water Act. The intent was to clearly define:

- Jurisdictional limits of tributaries of navigable waterways;
- Set boundaries on covering nearby waters;
- Identify specific national water treasures by name (prairie potholes, etc.);
- Clearly define when a ditch is jurisdictional, and when it is not;
- Maintain status that waters within Municipal Separate Storm Water Sewer Systems (MS4) are not jurisdictional; and
- Reduce the use of case-specific analysis of waters.

Also on May 27, 2015 a publication, *Technical Support Document for the Clean Water Rule: Definition of Waters of the United States* (EPA, 2105), was released discussing in detail why the significant nexus (SNE) between one water and another is important. It specifically ties distances to the various types of waters mentioned within the Code of Federal Regulations [33 CFR 328.3(a)(1) through (a)(8)]. For example, the document states "Waters located within the 100-year floodplain of a traditional navigable water, interstate water, or the territorial seas and waters located more than 1,500 feet and less than 4,000 feet from the lateral limit of an (a)(1) or (a)(3)

water may still be determined to have a significant nexus on a case-specific basis under paragraph (a)(8) of the rule and, thus, be a “water of the United States” (EPA 2015).

On June 29, 2015 the new Clean Water Rule was entered into the Federal Register (40 CFR Parts 110, 112, 116, et al. Clean Water Rule: Definition of “waters of the United States”; Final Rule). This report will refer to this rule as “June 29, 2015 WOTUS Rule”. This rule includes exact distances mentioned in the May 27, 2015 Technical Support Document as it relates to adjacent waters, including the following:

- Waters within 100 ft. of jurisdictional waters;
- Waters within the 100-year floodplain to a maximum of 1,500 feet from the ordinary high water mark (OHWM);
- Waters within the 100-year floodplain with a SNE to the Traditional Navigable Water (TNW); and
- Waters with a SNE within 4,000 ft. of jurisdictional waters.

On October 9, 2015 the U.S. Court of Appeals for the Sixth Circuit (Court) issued a nationwide stay against the enforcement of the June 29, 2015 WOTUS Rule. The Court stated, “...we conclude that...Justice Kennedy’s opinion in *Rapanos* represents the best instruction on the permissible parameters of “waters of the United States” as used in the Clean Water Act, it is far from clear that the new Rule’s distance limitations are harmonious with the instruction.

Moreover, the Court stated that the rulemaking process by which the distance limitations were adopted is facially suspect. Petitioners contend the proposed rule that was published, on which interested persons were invited to comment, did not include any proposed distance limitations in its use of terms like “adjacent waters” and “significant nexus.” Consequently, petitioners contend, the Final Rule cannot be considered a “logical outgrowth” of the rule proposed, as required to satisfy the notice-and-comment requirements of the APA, 5 U.S.C. Section 553. As a further consequence of this defect, petitioners contend, the record compiled by respondents is devoid of specific scientific support for the distance limitations that were included in the Final Rule. They contend the Rule is therefore not the product of reasoned decision-making and is vulnerable to attack as impermissibly “arbitrary or capricious” under the APA, 5 U.S.C. Section 706(2).”

Until further notice, the June 29, 2015 WOTUS Rule is not in effect. Furthermore, this report does not attempt to include a professional opinion as it relates to the June 29, 2015 WOTUS Rule.

## 2.2 Waters of the State

“Waters of the State” are within the jurisdiction of the Ohio Environmental Protection Agency (OEPA). They are generally defined as surface and underground water bodies, which extend through or exist wholly in the State of Ohio, which includes, but is not limited to, streams and both isolated and non-isolated wetlands. Private ponds, or any pond, reservoir, or facility built for reduction of pollutants prior to discharge are not included in this definition. In addition to “waters of the U.S.”, OEPA also regulates and issues permits for isolated wetland impacts.

OEPA relies on the USACE decision regarding wetland determinations and delineations including whether or not a wetland is isolated or non-isolated.

## 2.3 Wetlands

Wetlands are a category of “waters of the U.S.” for which a specific identification methodology has been developed. As described in detail in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), wetland boundaries are delineated using three criteria:

hydrophytic vegetation, hydric soils, and wetland hydrology. In addition to the criteria defined in the 1987 Manual, the procedures described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Environmental Laboratory, 2010) were used to evaluate the Study Area for the presence of wetlands.

### 2.3.1 Hydrophytic Vegetation

On June 1, 2012, the National Wetland Plant List (NWPL), formerly called the National List of Plant Species that Occur in Wetlands (Reed 1988), went into effect after being released by the U.S. Army Corps of Engineers (USACE) as part of an interagency effort with the U.S. Fish and Wildlife Service (USFWS), the U.S. Environmental Protection Agency (EPA), and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) (Lichvar and Kartesz, 2009). The NWPL, along with the information implied by its wetland plant species status ratings, provides general botanical information about wetland plants and is used extensively in wetland delineation, restoration, and mitigation efforts. The NWPL consists of a comprehensive list of wetland plant species that occur within the United States along with their respective wetland indicator statuses by region. An indicator status reflects the likelihood that a particular plant species occurs in a wetland or upland (Lichvar et al. 2012). Definitions of the five indicator categories are presented below.

**OBL (Obligate Wetland Plants):** almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface. These plants are of four types: submerged, floating, floating-leaved, and emergent.

**FACW (Facultative Wetland Plants):** usually occur in wetlands, but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.

**FAC (Facultative Plants):** occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.

**FACU (Facultative Upland Plants):** usually occur in non-wetlands, but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.

**UPL (Upland Plants):** almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

According to the USACE's Midwest Regional Supplement, plants that are rated as FAC, FACW, or OBL are classified as wetland plant species. The percentage of dominant wetland species in each of the four vegetation strata (tree, shrub/sapling, herbaceous, and woody vine) in the sample area determines the hydrophytic (wetland) status of the plant community. Dominant species are chosen independently from each stratum of the community. In general, dominants are the most abundant species that individually or collectively account for more than 50 percent of the total

coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total.

For the purposes of determining dominant plant species, the four vegetation strata are defined. Trees consist of woody species 3 inches or greater in diameter at breast height (DBH). Shrubs and saplings are woody species that are over 1 meter in height and less than 3 inches DBH. Herbaceous species consist of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 1 meter tall. Woody vines consist of vine species greater than 1 meter in height, such as wild grapes.

### **2.3.2 Hydric Soils**

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. In general, hydric soils are flooded, ponded, or saturated for a week or more during the growing season when soil temperatures are above 32 degrees Fahrenheit. The anaerobic conditions created by repeated or prolonged saturation or flooding result in permanent changes in soil color and chemistry, which are used to differentiate hydric from non-hydric soils.

In this report, soil colors are described using the Munsell notation system. This method of describing soil color consists of separate notations for hue, value, and chroma that are combined in that order to form the color designation. The hue notation of a color indicates its relation to red, yellow, green, blue, and purple; the value notation indicates its lightness, and the chroma notation indicates its strength or departure from a neutral of the same lightness.

The symbol for hue consists of a number from 1 to 10, followed by the letter abbreviation of the color. Within each letter range, the hue becomes more yellow and less red as the numbers increase. The notation for value consists of numbers from 0 for absolute black, to 10 for absolute white. The notation for chroma consists of numbers beginning with /0 for neutral grays and increasing at equal intervals. A soil described as 10YR 3/1 soil is more gray than a soil designated 10YR 3/6.

### **2.3.3 Wetland Hydrology**

Wetland hydrology is defined as the presence of water for a significant period of time at or near the surface (within the root zone) during the growing season. Wetland hydrology is present only seasonally in many cases, and is often inferred by indirect evidence. Hydrology is controlled by such factors as seasonal and long-term rainfall patterns, local geology and topography, soil type, local water table conditions, and drainage. Primary indicators of hydrology are inundation, soil saturation in the upper 12 inches of the soil, watermarks, sediment deposits, and drainage patterns. Secondary indicators such as oxidized root channels in the upper 12 inches of the soil, water-stained leaves, local soil survey data, and the FAC-neutral vegetation test are sometimes used to identify hydrology. A primary indicator or two or more secondary indicators are required to establish a positive indication of hydrology.

### **2.3.4 Wetland Definition Summary**

In general, an area must meet all three criteria to be classified as a wetland. In certain problem areas such as seasonal wetlands, which are not wet at all times, or in recently disturbed (atypical) situations, areas may be considered a wetland if only two criteria are met. In special situations, an area that meets the wetland definition may not be within the USACE's jurisdiction due to a specific regulatory exemption.

## 2.4 Streams, Rivers, Watercourses & Jurisdictional Ditches

With non-tidal waters, in the absence of adjacent wetlands, the extent of the USACE's jurisdiction is defined by the OHWM. USACE regulations define the term "ordinary high water mark" for purposes of the CWA lateral jurisdiction at 33 CFR 328.3(e), which states:

The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Streams, rivers, watercourse, and ditches within the Study Area were evaluated using the above definition and documented. Waterways that did exhibit an OHWM were recorded and evaluated using the Ohio Environmental Protection Agency's Primary Headwater Habitat Evaluation (HHEI) or Qualitative Habitat Evaluation Index (QHEI) methodology. If applicable, the results of the HHEI and/or QHEI are presented in Section 3.2.

## 2.5 Endangered Species Act

Endangered, Threatened, and rare (ETR) species are protected at both the state and federal level (ORC 1531.25 and 50 CFR 17.11 through 17.12, respectively). The Ohio Revised Code defines "Take" as to harass, hunt, capture, or kill; or attempt to harass, hunt, capture, or kill.

The USFWS, under authority of the Endangered Species Act of 1973 (16 U.S. Code 1531), as amended, has the responsibility for federally listed species. The Ohio Department of Natural Resources Division of Wildlife (ODNR-DOW) has the responsibility for state listed species.

# 3 Background Information

---

## 3.1 Existing Maps

Several sources of information were consulted to identify potential wetlands and wetland soil units on the site. These include the USFWS's *National Wetland Inventory* (NWI), the USGS's *National Hydrography Dataset* (NHD), and the Natural Resources Conservation Service's (NRCS) *Soil Survey* for this county. These maps identify potential wetlands and wetland soil units on the site. The NHD maps are used to portray surface water. The NWI maps were prepared from high altitude photography and in most cases were not field checked. Because of this, wetlands are sometimes erroneously identified, missed, or misidentified. Additionally, the criteria used in identifying these wetlands were different from those currently used by the USACE. The county soil maps, on the other hand, were developed from actual field investigations. However, they address only one of the three required wetland criteria and may reflect historical conditions rather than current site conditions. The resolution of the soil maps limits their accuracy as well. The mapping units are often generalized based on topography and many mapping units contain inclusions of other soil types for up to 15 percent of the area of the unit. The USACE does not accept the use of either of these maps to make wetland determinations.

### 3.1.1 National Wetland Inventory

The NWI map of the area (Figure 1) identified one PUBGx (Palustrine, Unconsolidated Bottom, Intermittently Exposed, Excavated) freshwater pond within the Study Area.



**3.1.2 National Hydrography Dataset**

The NHD dataset did not identified any surface waters within the Study Area.

**3.1.3 Soil Survey**

The NRCS Soil Survey identified three (3) soil series within the project Study Area (Figure 3). The following table identifies the soil unit symbol, soil unit name, and whether or not the soil type contains components that meet the hydric soil criteria.

**Table 3-2 Soil Map Units within the F7581/F7582/F5689 – 138kV Garver Substation TLoop Study Area**

| Symbol | Description                                   | Hydric |
|--------|---|--------|
| Pa     | Patton silty clay loam, 0 to 2 percent slopes | Y      |
| PrB    | Princeton sandy loam, 2 to 8 percent slopes   | N      |
| Rn     | Ross loam, 0 to 2 occasionally flooded        | N      |

## 4 Methodology and Description

### 4.1 Regulated Waters Investigation

The delineation of regulated waters within the Study Area was based on the methodology described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Environmental Laboratory, 2010) as required by current USACE policy.

Prior to the field work, the background information was reviewed to establish the probability and potential location of wetlands on the site. Next, a general reconnaissance of the Study Area was conducted to determine site conditions. The site was then walked with the specific intent of determining wetland boundaries. Data stations were established at locations within and near the wetland areas to document soil characteristics, evidence of hydrology and dominant vegetation. Note that no attempt was made to examine a full soil profile to confirm any soil series designations. However, when possible, soils were examined to a depth of at least 16 inches to assess soil characteristics and site hydrology. Complete descriptions of typical soil series can be found in the soil survey for these counties.

**4.1.1 Site Photographs.**

Photographs of the site are located in Appendix A. These photographs are the visual documentation of site conditions at the time of inspection. The photographs are intended to provide representative visual samples of any wetlands or other special features found on the site.

**4.1.2 Delineation Data Sheets.**

Where stations represent a wetland boundary point they are presented as paired data points (DP), one each documenting the wetland and upland sides of the wetland boundary. These forms are the written documentation of how representative sample stations met or did not meet each of the wetland criteria. For plant species included on the National Wetlands Plant List, nomenclature will follow their lead. For all other plants not listed in the NWPL, nomenclature will follow the USDA’s Plants Database.

## 4.2 Technical Descriptions

Complete wetland field data sheets from the site investigation are located in Appendix B for the Duke Energy F7581/F7582/F5689 – 138kV Garver Substation TLoop. The project included the review of an approximate 11.58 acre Study Area, centered on existing and proposed overhead electric transmission line ROW and existing substation infrastructure located in Middletown, Butler County, Ohio (see Figure 1). The Duke Energy F7581/F7582/F5689 – 138kV Garver Substation TLoop project initiates east of Cincinnati Dayton Road (39.4651 N, -84.34733 W) and south of Garver Substation (39.46549 N, -84.35351 W). The project terminates at the Garver Substation (39.46687 N, -84.35283 W). The Study Area consisted of a mix of habitats including secondary growth deciduous forest, forested wetland, emergent wetland, scrub shrub, and fallow field. The project Study Area is located entirely within Shaker Creek watershed (14-digit HUC 05080002-050-060).

### 4.2.1 Wetland and Stream Descriptions

#### Pond 1 (3.3 acres with 0.4 located within the Study Area)

Pond 1 was a freshwater excavated pond in hydric soils located in the southeastern portion of the Study Area. A box culvert was located in the southwest corner of Pond 1. It is our best professional judgement based on desktop review and topography that this culvert discharges off site into Shaker Creek, a tributary to Dicks Creek that ultimately flows into the Great Miami River, Traditional Navigable Water. Due to this connection, Pond 1 should be considered a jurisdictional water of the United States.

#### Wetland 1 (0.65 acre with 0.3 located within the Study Area)

Wetland 1 was a palustrine forested wetland, located approximately 640 LF from Shaker Creek within the 100YR floodplain to Shaker Creek, a tributary to Dicks Creek which ultimately flows into the Great Miami River, Traditional Navigable Water. Therefore, Wetland 1 should be considered a jurisdictional water of the United States. The ORAM score for Wetland 1 was 38, categorizing the wetland as a category 2, or moderate quality, wetland.

#### Wetland Data Point

##### Data Point 01 (DP01)

Dominant vegetation in the vicinity of DP01 included shell-bark hickory (*Carya laciniosa*, FACW) in multiple strata, common hackberry (*Celtis occidentalis*, FAC), and white grass (*Leersia virginica*, FACW). In addition, non-dominant vegetation observed included Amur honeysuckle (*Lonicera maackii*, UPL), green ash (*Fraxinus pennsylvanica*, FACW), Muskingum sedge (*Carex muskingumensis*, OBL), and limestone-meadow sedge (*Carex granularis*, FACW). The plants at this data point qualified as hydrophytic vegetation. The soil from 0-16" had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 15%, and a texture of clay loam. The soil at the data point was mapped as Patton silty clay loam (Pa) and met the depleted matrix (F3), and redox depressions (F8) hydric soil criteria. Secondary indicators of hydrology observed included geomorphic position (D2), and the FAC-neutral test (D5). This data point qualified as a wetland.

#### Upland Data Point

##### Data Point 02 (DP02)

Dominant vegetation in the vicinity of dp04 included quaking aspen (*Populus tremuloides*, FAC), American basswood (*Tilia americana*, FACU), and Amur honeysuckle (*Lonicera maackii*, UPL).

In addition, non-dominant vegetation observed included Amur honeysuckle (*Lonicera maackii*, UPL), and groundivy (*Glechoma hederacea*, FACU). The plants at this data point did not qualify as hydrophytic vegetation criteria. The soil at the data point was mapped as Patton silty clay loam (Pa) and did not meet any hydric soil criteria. No indicators of hydrology were observed. This data point did not meet wetland criteria.

#### **Wetland 2 (0.01 acre within the Study Area)**

Wetland 2 was a small depressional palustrine emergent wetland, located approximately 450 LF from Shaker Creek within the 100YR floodplain to Shaker Creek, a tributary to Dicks Creek which ultimately flows into the Great Miami River, Traditional Navigable Water. Therefore, Wetland 2 should be considered a jurisdictional water of the United States. The ORAM score for Wetland 2 was 17, categorizing the wetland as a category 1, or low quality, wetland.

#### **Wetland Data Point**

##### **Data Point 03 (DP03)**

Dominant vegetation in the vicinity of DP03 included black locust (*Robinia pseudoacacia*, FACU), and reed canary grass (*Phalaris arundinacea*, FACW). In addition, non-dominant vegetation observed included white mulberry (*Morus alba*, FAC), green ash (*Fraxinus pennsylvanica*, FACW), ash-leaf maple (*Acer negundo*, FAC), indian-hemp (*Apocynum cannabinum*, FAC), white heath American-aster (*Symphotrichum ericoides*, FACU), curly dock (*Rumex crispus*, FAC), Fuller's teasel (*Dipsacus fullonum*, FACU), and burr oak (*Quercus macrocarpa*, FAC). The plants at this data point qualified as hydrophytic vegetation. The soil from 0-16" had a matrix soil color of 10YR 4/2 with concentrations in the matrix at 10% and a texture of clay loam. The soil at the data point was mapped as Patton silty clay loam (Pa), and met the depleted matrix (F3), and redox depressions (F8) hydric soil criteria. Secondary indicators of hydrology observed included geomorphic position (D2), and the FAC-neutral test (D5). This data point qualified as a wetland.

#### **Upland Data Point**

##### **Data Point 04 (DP04)**

Dominant vegetation in the vicinity of DP04 included black locust (*Robinia pseudoacacia*, FACU) in multiple strata, Canadian goldenrod (*Solidago canadensis*, FACU), and reed canary grass (*Phalaris arundinacea*, FACW). In addition, non-dominant vegetation observed included quaking aspen (*Populus tremuloides*, FAC), white heath American-aster (*Symphotrichum ericoides*, FACU), Amur honeysuckle (*Lonicera maackii*, UPL), creeping-jenny (*Lysimachia nummularia*, FACW), white mulberry (*Morus alba*, FAC), and Eastern poison ivy (*Toxicodendron radicans*, FAC). The plants at this data point did not qualify as hydrophytic vegetation criteria. The soil from 0-16" had a matrix soil color of 10YR 4/2 with a texture of clay loam. The soil at the data point was mapped as Patton silty clay loam (Pa), and did not meet any hydric soil criteria. No indicators of hydrology were observed. This data point did not meet wetland criteria.

### **4.3 Endangered, Threatened and Rare Species**

The potential for listed species known to occur within Butler County were evaluated based on the habitat observed within the Study Area. A walking survey of the Study Area was performed in which all observed Endangered, Threatened and Rare (ETR) species or specific known special habitats were noted. Coordination with the U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources Division of Wildlife (ODNR-DOW) occurred as it related to the Natural Heritage Database search results for the Study Area.

Appendix C contains the results of ETR species as they relate to the habitat observed within the Study Area are included with this report.

#### **4.3.1 Bat Roost Habitat**

The Indiana Bat (*Myotis sodalis*, federally endangered) and Northern Long-eared Bat (*Myotis septentrionalis*, federally threatened) are protected under the Endangered Species Act, which is overseen by the USFWS. Typical guidance from USFWS regarding potential bat roost trees is avoidance of cutting trees from April through October. The Study Area was assessed for potential bat roosting habitat with respect to any indicated clearing activities. Potential bat roost trees include dead or dying trees (including live shagbark hickories) with at least 10-percent exfoliating bark, a diameter at breast height (DBH) of at least 3 inches, and solar exposure for maternity roost trees (the tree is on a wooded edge or in a canopy gap). Correspondence from USFWS regarding Indiana Bat and Northern Long-eared Bat is included within Appendix C.

The entire project Study Area was surveyed to identify potential Indiana bat and northern long-eared bat roost trees. Based on our field inspection and our best professional judgment, suitable bat roost habitat was observed within approximately 1.57 acres of the Study Area that consisted of secondary growth forest located within the new projected powerline ROW. Dominant canopy species included shell-bark hickory (*Carya laciniosa*), quaking aspen (*Populus tremuloides*), American basswood (*Tilia americana*), bur oak (*Quercus macrocarpa*), and red oak (*Quercus rubra*). Average diameter at breast height (DBH) for these canopy species was approximately eight (8) to ten (10) inches with a maximum of approximately 30 inches. Understory vegetation was dominated by dense Amur Honeysuckle (*Lonicera maackii*) and saplings of the canopy species.

## **5 Jurisdictional Analysis**

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### **5.1 U.S. Army Corps of Engineers**

The USACE has authority over the discharge of fill or dredged material into “waters of the U.S.”. This includes authority over any filling, mechanical land clearing, or construction activities that occur within the boundaries of any “waters of the U.S.”. A permit must be obtained from the USACE before any of these activities occur. Permits can be divided into two general categories: Individual Permits and Nationwide Permits.

Individual Permits are required for projects that do not fall into one of the specific Nationwide Permits (NWP) or are deemed to have significant environmental impacts. These permits are much more difficult to obtain and receive a much higher level of regulatory agency and public scrutiny and may require several months to more than a year for processing.

Nationwide Permits (NWP) have been developed for projects that meet specific criteria and are deemed to have minimal impact on the aquatic environment. There are currently 52 Nationwide Permits for qualifying activities with 31 Nationwide Permit General Conditions that must be satisfied in order to receive NWP consideration from the USACE.

## 5.2 Ohio Environmental Protection Agency

The OEPA is responsible for issuing Clean Water Act (CWA) Section 401 permits known as Water Quality Certifications (WQC) for all impacts to “waters of the State of Ohio.” This includes authority over any dredging, filling, mechanical land clearing, impoundments or construction activities that occur within the boundaries of any “waters of the State,” including those isolated waters not otherwise regulated by the USACE.

The OEPA issues Section 401 WQC in conjunction with the USACE’ Section 404 permits. A Section 401 Water Quality Certification must be received before the USACE can issue any Section 404 Department of the Army Permit. The OEPA must issue Individual Section 401 WQC for all Individual Section 404 Permits.

Water quality certification may be granted, without notification to the OEPA, if the project falls under the NWP limitations described above. In order to qualify for this granted certification, all prior-authorized and *de minimis* Ohio State Certification General Limitations and Conditions as published by the OEPA must be satisfied.

The OEPA also requires notification for all impacts to isolated wetlands, which includes a permit application and mitigation plan pursuant to Section 6111 of Ohio Revised Code (ORC).

## 6 Summary and Conclusion

### 6.1 Summary

Cardno inspected the F7581/7582/5689 – 138kV Garver Substation TLoop Study Area on November 7, 2018.

#### 6.1.1 Wetlands and Waterways

One (1) jurisdictional forested wetland, one (1) jurisdictional forested wetland, and one (1) pond were identified within the F7581/7582/5689 – 138kV Garver Substation TLoop Study Area.

| Feature Name | USGS/ NWI Identified | Feature Class | Regulatory Status <sup>1</sup> | QHEI/HHEI/ ORAM Score |    | Acreage (AC) |
|--------------|----------------------|---------------|--------------------------------|-----------------------|----|--------------|
| Pond 1       | Yes                  | Perennial     | Jurisdictional                 | N/A                   |    | 0.09         |
| Wetland 1    | No                   | PFO           | Jurisdictional                 | 52                    |    | 0.65         |
| Wetland 2    | No                   | PEM           | Jurisdictional                 | 17                    |    | 0.01         |
| Totals       |                      |               | Ponds                          | Perennial             |    | 0.09         |
|              |                      |               | Wetlands                       | PFO                   | JD | 0.65         |
|              |                      |               |                                | PEM                   | JD | 0.01         |

<sup>1</sup> Regulatory Status is based on our “professional judgment” on experience; however, the USACE makes the final determination.

#### 6.1.2 Endangered, Threatened, and Rare Species

Several sources of information were consulted to further define the potential habitat of listed species that occur within the county of the Study Area. The table presented in Appendix C

contains the list of ETR species known to occur within Butler County and their potential to occur within the Study Area based on their habitat requirements and field observations.

Correspondence letters to the ODNR-DOW and the USFWS regarding RTE species located within a ½-mile of the Study Area were sent on November 9, 2018. The USFWS response letter was received on November 19, 2018. The copies of the correspondence and response letters are located in Appendix D.

### **6.1.3 Indiana Bat and Northern Long-eared Bat Roost Habitat**

Suitable bat roost habitat was observed within the approximate 1.57-acre portion of the Study Area, which consisted of secondary growth forest located within proposed new ROW.

However, based on our current project understanding and our best professional judgment, we do not recommend any further survey options for this site at this time if the USFWS recommendation that all tree clearing activities shall occur between October 1 and March 31 is adhered to. If tree clearing activities cannot be completed within the USFWS recommended October 1 through March 31 window mist-net surveys for the Indiana bat and Northern Long-eared bat will need to occur following the *USFWS 2018 Range-wide Indiana Bat Summer Survey Guidelines* (April 2018) protocol. According to the range-wide guidelines, net surveys shall incorporate either nine net nights per square 0.5 kilometer (123 acres) of project area, or four net nights per kilometer for linear projects. Due to the presence of white-nose syndrome in Ohio, the ODNR-DOW and USFWS Ohio Field Office has determined that mist-net surveys in Ohio should be conducted between June 1 and August 15.

The USFWS is the regulatory authority that makes the final determination as to the status of the Indiana Bat and Northern Long-eared Bat in the Study Area. Correspondence with the USFWS and ODNR-DOW regarding RTE located within a ½-mile of the Study Area were sent on November 9, 2018. The USFWS response letter was received on November 19, 2018. The correspondence and response letters are located in Appendix D.

## **6.2 Conclusion**

A permit must be obtained from the USACE and the OEPA prior to any filling, dredging, or mechanical land clearing that occurs within the boundaries of any ‘waters of the U.S.’ or ‘waters of the State’.

While this report represents our best professional judgment based on our knowledge and experience, it is important to note that the Huntington District of the U.S. Army Corps of Engineers has final discretionary authority over all jurisdictional determinations of ‘waters of the U.S.’ including wetlands under Section 404 of the CWA in this region. It is therefore, recommended that a copy of this report be furnished to the Huntington District of the U.S. Army Corps of Engineers to confirm the results of our findings.

## 7 References

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DUKE ENERGY  
F7581/F7582/F5689—138kV  
GARVER SUBSTATION TLOOP

FIGURES