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 sheepnose (*Plethobasus cyphyus*), a state endangered and federally endangered mussel, the fanshell (*Cyprogenia stegaria*), a state endangered and federally endangered mussel, the pink mucket (*Lampsilis orbiculata*), a state endangered and federally endangered mussel, the rayed bean (*Villosa fabalis*), a state endangered and federally endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, the ebonyshell (*Fusconaia ebena*), a state endangered mussel, the long-solid (*Fusconaia maculata maculata*), a state endangered mussel, the butterfly (*Ellipsaria lineolata*), a state endangered mussel, the washboard (*Megalonaias nervosa*), a state endangered mussel, the elephant-ear (*Elliptio crassidens crassidens*), a state endangered mussel, the Ohio pigtoe (*Pleurobema cordatum*), a state endangered mussel, the monkeyface (*Quadrula metanevra*), a state endangered mussel, the wartyback (*Quadrula nodulata*), a state endangered mussel, the black sandshell (*Ligumia recta*), a state threatened mussel, the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel, and the threehorn wartyback (*Obliquaria reflexa*), 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 shortnose gar (*Lepisosteus platostomus*), a state endangered fish, the shoal chub (*Macrhybopsis hyostoma*), a state endangered fish, the shovelnose sturgeon (*Scaphirhynchus platorynchus*), a state endangered fish, the lake sturgeon (*Acipenser fulvescens*), a state endangered fish, the northern madtom (*Noturus stigmosus*), a state endangered fish, the bigeye shiner (*Notropis boops*) a state threatened fish, the mountain madtom (*Noturus eleutherus*), a state threatened fish, the river darter (*Percina shumardi*) a state threatened fish, the channel darter (*Percina copelandi*), a state threatened fish, the blue sucker (*Cycleptus elongatus*), a state threatened fish, and the paddlefish (*Polyodon spathula*) a state threatened fish. 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 meadows and other wetlands. 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 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 American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. Due to the location, the type of habitat present at the project site, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. In the Oak Openings area west of Toledo, lark sparrows occupy open grass and shrubby fields along sandy beach ridges. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. Due to the location, the type of habitat present at the project site, and the type of 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

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 if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

Cori Jansing

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>
Sent: Tuesday, October 29, 2019 9:19 AM
To: Cori Jansing
Cc: nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us
Subject: Duke Energy, Cumminsville Phase 5B Rebuild Project, Hamilton County

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# 03E15000-2020-TA-0141

Dear Ms. Jansing,

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

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

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

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

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

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

Sincerely,

Patrice M. Ashfield,
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW

Kate Parsons, ODNR-DOW

1/31/2020

Cardno

11121 Canal Road
Cincinnati, Ohio 45241
USA

Phone **513 489 2402**
Fax 513 489 2404
www.cardno.com

The Ohio Power Siting Board
180 E Broad Street
Columbus, OH 43215

Subject: **Endangered Species Habitat Assessment: Cumminsville 5B Rebuild Project City of Cincinnati, Hamilton County, Ohio**

To Whom It May Concern:

The following summarizes the findings from our Endangered Species Habitat Assessment of the Cumminsville 5B Rebuild Project Area. The Project Area consists of approximately 0.28 miles (4.9 Ac) of existing 138-kilovolt (kV) transmission line between the Structure M11-X1-31 to Structure M11-X1-31A within existing Duke Energy Ohio right-of-way (ROW) located in the City of Cincinnati, Hamilton County, Ohio.

Methods and Summary

Cardno performed a site assessment on September 12, 2019 to identify any potential Ohio Department of Natural Resources (ODNR) State Endangered or Threatened species habitat within the proposed Cumminsville 5B Rebuild Project Area. Specifically, the ODNR-DOW identified records of the state threatened maypop (*Passiflora incarnata*) and black-crowned night-heron (*Nycticorax nycticorax*) within one-mile of the Project Area. Additionally, the Cumminsville 5B Rebuild Project falls within the range of thirteen (13) state endangered mussel species, three (3) state threatened mussel species, five (5) state endangered fish species, and four (4) state threatened fish species. The Project Area is also located within the range of the state threatened Kirtland's snake (*Clonophis kirtlandii*), the state endangered cave salamander (*Eurycea lucifuga*), the state endangered American bittern (*Botaurus lentiginosus*), and the state endangered lark sparrow (*Chondestes grammacus*).

The Project Area consisted of three habitats: urban turf/impervious surfaces, scrub-shrub, and secondary growth forest. No wetlands and one (1) perennial stream (Mill Creek) was identified within the proposed Project Area.

Urban Turf/Impervious Surfaces

Urban turf vegetation assemblage dominated the majority of the Project Area and includes impervious surfaces in addition to maintained turf. Dominant species in this

habitat type consisted red fescue (*Festuca rubra*), tall fescue (*Festuca arundinaceus*), dandelion (*Taraxacum officinale*), white clover (*Trifolium repens*), and broadleaf plantain (*Plantago major*).

Scrub/Shrub

Scrub/shrub vegetation assemblage comprised approximately 0.97 acres and was located sporadically throughout the Project Area. Dominant shrub species in this habitat type consisted of white mulberry (*Morus alba*), tree-of-heaven (*Ailanthus altissima*), Siberian elm (*Ulmus pumila*), and Amur honeysuckle (*Lonicera maackii*).

Secondary Growth Forest

The secondary deciduous forest vegetation assemblage comprised approximately 0.28 acres was located east of Mill Creek and adjacent to the existing ROW within the eastern portion of the Project Area. Dominant tree species in this habitat type consisted of eastern box elder (*Acer negundo*), white mulberry (*Morus alba*), tree-of-heaven (*Ailanthus altissima*), and silver maple (*Acer saccharinum*). Understory vegetation was dominated by Amur honeysuckle (*Lonicera maackii*) and saplings of the canopy species. Although a formal study was not part of this scope, there was low potential habitat for listed species identified within this habitat. Average diameter at breast height (DBH) for these canopy species was approximately four (4) to six (6) inches with a maximum of approximately ten (10) inches.

Stream 1 (Mill Creek)

Mill Creek is a perennial stream located southeast of Duke Energy Structure M11-X2-31A and northwest of Duke Energy Structure M11-X1-31. This segment of Mill Creek has historically been channelized with banks entirely lined in concrete at the time of the field survey. The dominant substrates were gravel, sand, and silt. The Ordinary High Water Mark (OHWM) width was 90 feet and the depth was 5 to 6 feet. The maximum pool depth observed was approximately 2.5 feet. Mill Creek is classified as a Traditional Navigable Water (TNW) immediately downstream of the proposed Project Area. Therefore, Mill Creek should be considered a jurisdictional water of the United States. Mill Creek had a QHEI score of 40.5. This stream is a designated Warm Water Habitat (WWH).

Listed Species Habitat Descriptions

Maypop (*Passiflora incarnata*)

The state threatened maypop occurs in thickets, disturbed areas, near riverbanks, and near unmowed pastures, roadsides, and railroads. In Ohio indigenous populations have almost entirely been recorded in the southernmost counties along the Ohio River. The Cumminsville 5B Rebuild Project Area is located within a highly developed urban area with streambanks entirely lined in concrete a little to no riparian buffer which does not support the maypop habitat.

Black-crowned night-heron (*Nycticorax nycticorax*)

The state threatened black-crowned night-heron roost in thick vegetation along streams, lakes, and wetlands. These largely nocturnal herons are likely more common than suspected, but tend to hide in thick vegetation during the day. At night, they often give a very distinctive, deep quawk call that reveals their presence. They are hardy and sometimes overwinter in favored spots. They typically eat fish, leeches, earthworms, aquatic and terrestrial insects. No nesting sites were identified within the Project Area during the field investigation. The Cumminsville 5B Rebuild Project Area is located within a highly developed urban area which lacks appropriate vegetative cover necessary to support black-crowned night-heron habitat.

Indiana bat (*Myotis sodalis*)

The state endangered Indiana bat summer habitat includes small to medium river and stream corridors with well developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests. Potential Indiana bat roost trees 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. No trees exhibiting traits characteristic of potential Indiana bat roost trees were identified within the Project Area. The Cumminsville 5B Rebuild Project Area is located within a highly developed urban area which lacked sufficient suitable wooded habitat and therefore does not support Indiana bat habitat.

Freshwater mussel and fish species

Freshwater mussels and fish require perennial water sources to sustain life. Mussels and fish can inhabit streams that contain a wide array of substrates and flow regimes. Most species of freshwater mussels prefer medium to large bodies of water in areas with depths less than 3 feet. One perennial stream (Mill Creek) was identified within the Project Area. No impacts to Mill Creek are anticipated by the Cumminsville 5B Rebuild Project therefore no impacts to mussel or fish species will occur as a result of construction activities associated with the Project.

Kirtland's snake (*Clonophis kirtlandii*)

The state threatened Kirtland's snake is usually found in open wetlands such as wet prairies, prairie fens, wet meadows and marshes, but they also occur in openings or along the edges of forested wetlands and floodplains (e.g., grass/sedge openings in tamarack swamps). No wetlands or floodplains were located within the Project Area. The Cumminsville 5B Rebuild Project Area is located within a highly developed urban area that does not support the Kirtland's snake habitat.

Cave salamander (*Eurycea lucifuga*)

The state endangered cave salamander is found in and around caves, seeps, springs, springhouses, and small forested limestone creeks associated with groundwater. Cave salamanders live in rock crevices or under rocks, logs, or other debris, and feed on insects. Mill Creek was highly channelized and lacked appropriate in stream habitat necessary to support cave salamander habitat. No impacts to Mill Creek are anticipated by the Cumminsville 5B Rebuild Project therefore no impacts to cave salamander habitat will occur as a result of construction activities associated with the Project.

American Bittern (*Botaurus lentiginosus*)

The state endangered American bittern prefers large undisturbed wetlands that have scattered small pools amongst the dense vegetation. They occasionally occupy bogs, large wet meadows, and dense, shrubby swamps. No wetlands, bogs, or wet meadows were identified within the proposed Project Area. The Cumminsville 5B Rebuild Project Area is located within a highly developed urban area that does not support the American bittern habitat.

Lark Sparrow (*Chondestes grammacus*)

The state endangered lark sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. In the Oak Openings area west of Toledo, lark sparrows occupy open grass and shrubby fields along sandy beach ridges. The Cumminsville 5B Rebuild Project Area was located within a highly developed urban area that does not support the lark sparrow habitat.

Conclusion

Based on Cardno's site assessment and review of available resources, there is no available maypop (*Passiflora incarnata*), black-crowned night-heron (*Nycticorax nycticorax),* Indiana bat, Kirtland's snake (*Clonophis kirtlandii*), cave salamander (*Eurycea lucifuga*), lark sparrow (*Chondestes grammacus*) or American bittern (*Botaurus lentiginosus*) habitat within the proposed Cumminsville 5B Rebuild Project Area. Mill Creek contains potential low quality freshwater mussel and fish habitat within the proposed Project Area; however, no impacts to Mill Creek are anticipated by the Cumminsville 5B Rebuild Project therefore no impacts to mussel or fish species will occur as a result of the Project. No other rare, threatened, or endangered species or high quality natural communities or significant natural habitat areas were observed. The ODNR-DOW identified Mt. Storm Park, City of Cincinnati Parks and the Mill Creek Conservancy within one-mile of the Project Area. The Mill Creek Conservancy was contacted as it relates to the Project.

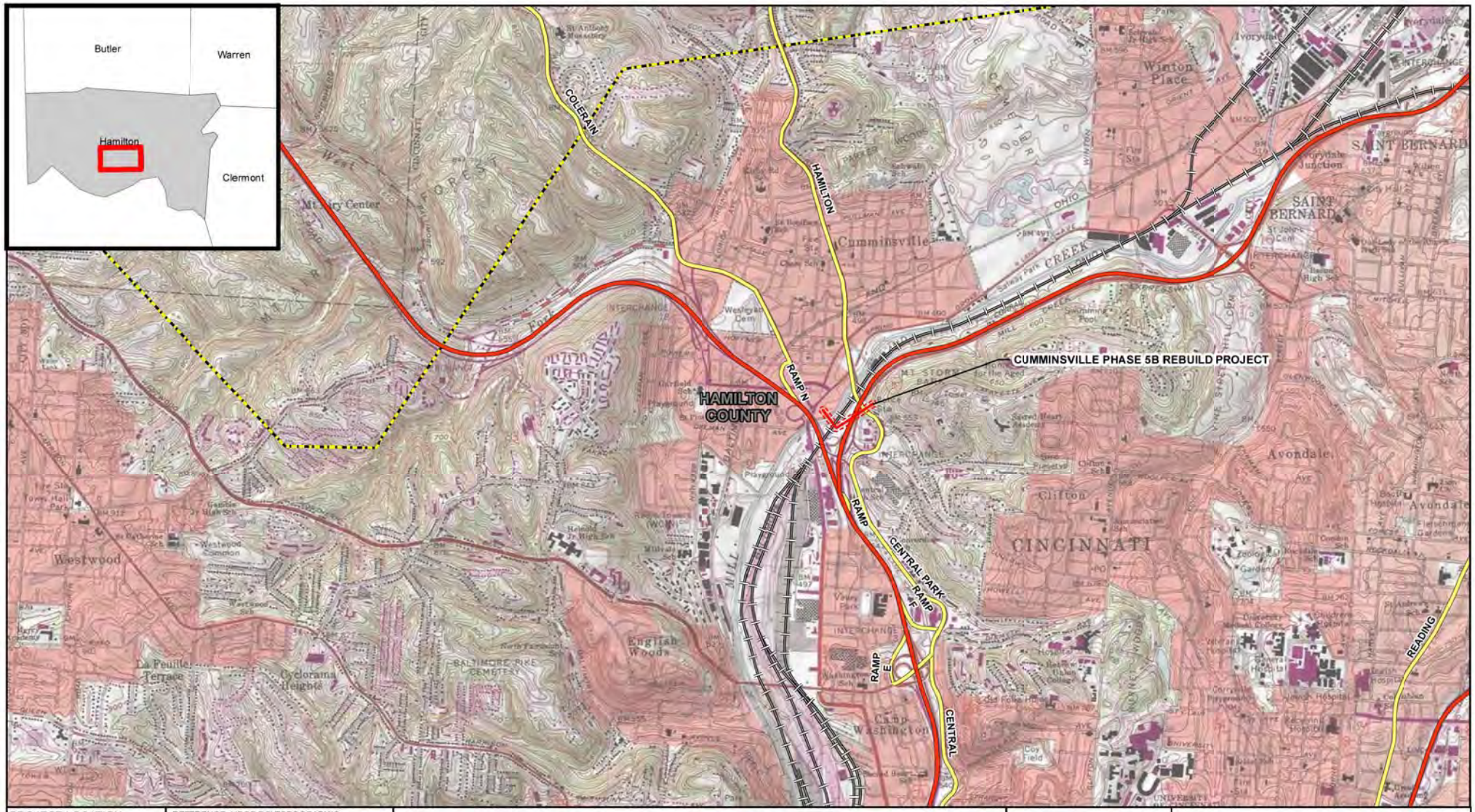
Thank you for this opportunity to provide Rare, Threatened, and Endangered Species consultation in support of this Project. Please contact me if you have any comments or questions regarding these findings or recommendations.

Sincerely,

Cori Jansing, PWS
Project Scientist
for Cardno
513-833-6392
Email: Cori.Jansing@cardno.com

Attachments: Figures, Photo log, HHEI Form, ODNR Coordination, USFWS Coordination, Mill Creek Conservancy Coordination

File: J156721M04



PROJECT LOCATION

HAMILTON COUNTY, OH

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE:CINCINNATI WEST, OHIO. OBTAINED VIAESRI USA TOPO, NATIONAL GEOGRAPHIC TOPO, AND USGS, ACCESSED 01/2017.

- Existing Facility
- Interstate
- State Highway
- US Highway
- Railroad
- Project Centerline
- 150-ft Corridor
- County Boundary
- Municipal Boundary

DUKE ENERGY.

Cardno

0 500 1,000 2,000 Feet

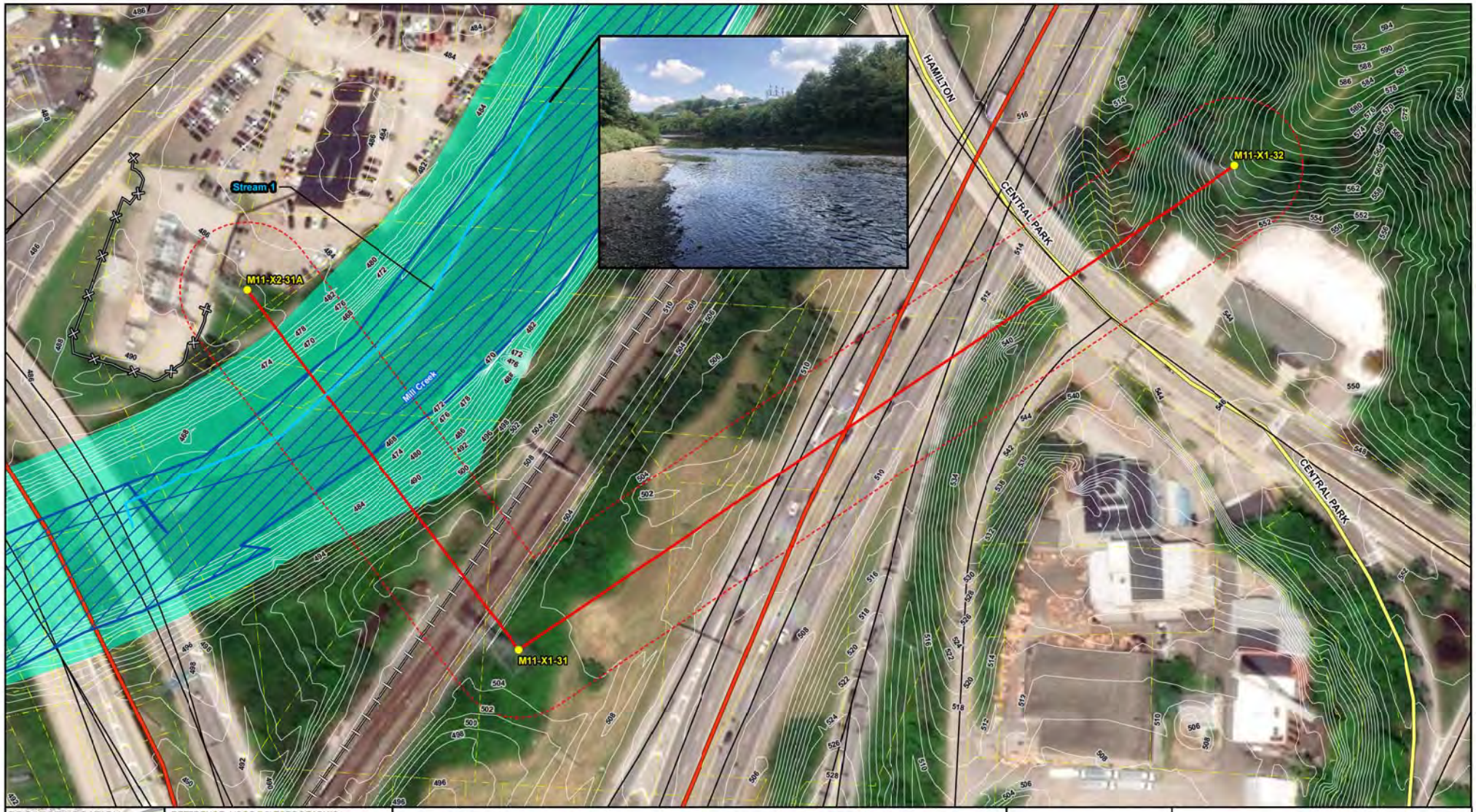
FIGURE 1
PROJECT VICINITY MAP
CUMMINSVILLE PHASE 5B REBUILD PROJECT
AGENCY COORESPONDENCE

DUKE ENERGY OHIO

DRAWN BY: SKL
CHECKED: CAJ

DATE: 9/17/2019
APPROVED: CAJ

\\cardno.corp\Global\US\Shared\CJFNProjects\Projects\15\156\156721M_DukeEnergy_9193\M04_SOW59_M19013301_Cumminsville5B\GIS\MXD\LEA\LEA1__Cumminsville_Project Vicinity Map.mxd



PROJECT LOCATION

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE:CINCINNATI WEST, OHIO. OBTAINED VIAESRI USA TOPO, NATIONAL GEOGRAPHIC TOPO, AND USGS, ACCESSED 01/2017.

2-ft Contours	Interstate	Railroad	Floodway
Existing Structure	NHD Flowline	Project Centerline	100-year Floodplain
Fence Line	Potnetial_Access	150-ft Corridor	NWI Wetlands
Delineated Stream	State Highway	Parcels	
Existing Facility	US Highway	Municipal Boundary	

DUKE ENERGY.

Cardno

FIGURE 2.01
ENVIRONMENTAL ACCESS PLAN KEY MAP
CUMMINSVILLE PHASE 5B REBUILD PROJECT
AGENCY COORDINATION

DUKE ENERGY OHIO

DRAWN BY: SKL
CHECKED: CAJ
DATE: 9/19/2019
APPROVED: CAJ

R:\Projects\15\156\156721M_DukeEnergy_9193\M04_SOW59_M19013301_Cumminsville5B\GIS\MXD\LEA\LEA3__Cumminsville_Environmental Access Plan.mxd

Photo 1. Mill Creek, View Looking Upstream, 09/12/2019.

Photo 2. Mill Creek, View Looking Downstream, 09/12/2019.

Photo 3. Mill Creek and Power Lines View Looking North East, 09/12/2019.

Photo 4. Transmission Tower, View Looking North, 09/12/2019.

Qualitative Habitat Evaluation Index Field Sheet

QHEI Score: 40.5

River Code: **RM:** **Stream:** Mill Creek

Date: 9/12/2019 **Location:** (39.153535, -84.541432)

Scorers Full Name: Cori Jansing / Jon Nielsen **Affiliation:** Cardno INC.

1.) SUBSTRATE

(Check ONLY Two Substrate TYPE BOXES; Estimate % present)

TYPE		Pool	Riffle			Pool	Riffle
☐	☐ BLDR/SLBS (10)			☐	☑ GRAVEL (7)	25	50
☐	☐ BOULDER (9)			☑	☐ SAND (6)	40	35
☐	☐ COBBLE (8)			☐	☐ BEDROCK (5)		
☐	☐ HARDPAN (4)			☐	☐ DETRITUS (3)		
☐	☐ MUCK (2)			☐	☐ ARTIFICIAL (0)	10	
☐	☐ SILT (2)	25	15				

NOTE: Ignore Sludge Originating From Point Sources

NUMBER OF SUBSTRATE TYPES: (High Quality Only, Score 5 or >)
☐ 4 or More (2)
☑ 3 or Less (0)

COMMENTS:

SUBSTRATE ORIGIN Check ONE (OR 2 & AVERAGE)
☑ LIMESTONE (1)
☐ TILLS (1)
☐ WETLANDS (0)
☐ HARDPAN (0)
☐ SANDSTONE (0)
☐ RIP/RAP (0)
☐ LACUSTRINE (0)
☐ SHALE (-1)
☐ COAL FINES (-2)

SUBSTRATE QUALITY Check ONE (OR 2 & AVERAGE)

SILT:
☐ SILT HEAVY (-2)
☑ SILT MODERATE (-1)
☐ SILT NORMAL (0)
☐ SILT FREE (1)

EMBEDDEDNESS:
☐ EXTENSIVE (-2)
☑ MODERATE (-1)
☐ NORMAL (0)
☐ NONE (1)

Substrate **12** Max 20

2.) INSTREAM COVER

(Give each cover type a score of 0 to 3; see back for instructions)

(Structure)
0 UNDERCUT BANKS (1)
0 OVERHANGING VEGETATION (1)
0 SHALLOWS (IN SLOW WATER) (1)
0 ROOTMATS (1)

TYPE: Score All that Occur
2 POOLS >70 cm (2)
0 ROOTWADS (1)
0 BOULDERS (1)
0 OXBOWS, BACKWATERS (1)
0 AQUATIC MACROPHYTES (1)
0 LOGS AND WOODY DEBRIS (1)

COMMENTS:

AMOUNT: (Check ONLY One or Check 2 & AVERAGE)
☐ EXTENSIVE >75% (11)
☐ MODERATE 25-75% (7)
☐ SPARSE 5-25% (3)
☑ NEARLY ABSENT <5%

Cover **3** Max 20

3.) CHANNEL MORPHOLOGY

(Check ONLY One per Category OR Check 2 & AVERAGE)

SINUOSITY
☐ HIGH (4)
☐ MODERATE (3)
☐ LOW (2)
☑ NONE (1)

DEVELOPMENT
☐ EXCELLENT (7)
☐ GOOD (5)
☐ FAIR (3)
☑ POOR (1)

CHANNELIZATION
☐ NONE (6)
☑ RECOVERED (4)
☑ RECOVERING (3)
☐ RECENT OR NO RECOVERY (1)

STABILITY
☑ HIGH (3)
☐ MODERATE (2)
☐ LOW (1)

MODIFICATIONS / OTHER
☐ SNAGGING
☐ RELOCATION
☐ CANOPY REMOVAL
☐ DREDGING
☐ ONE SIDE CHANNEL MODIFICATIONS
☐ IMPOUND
☐ ISLANDS
☐ LEVEED
☐ BANK SHAPING

COMMENTS:

Channel **8.5** Max 20

4.) RIPARIAN ZONE AND BANK EROSION

(Check ONE box per bank OR Check 2 & AVERAGE per bank)

River Right Looking Downstream

RIPARIAN WIDTH (Per Bank)
L R
☐ ☐ WIDE >50M (4)
☐ ☐ MODERATE 10-50M (3)
☐ ☐ NARROW 5-10M (2)
☐ ☐ VERY NARROW <5M (1)
☑ ☑ NONE (0)

FLOOD PLAIN QUALITY (Past 100 ft Riparian) (Most Predominant Per Bank)
L R
☐ ☐ FOREST, SWAMP (3)
☐ ☐ SHRUB OR OLD FIELD (2)
☐ ☐ RESIDENTIAL, PARK, NEW FIELD (1)
☐ ☐ FENCED PASTURE (1)
☐ ☐ CONSERVATION TILLAGE (1)
☑ ☑ URBAN OR INDUSTRIAL (0)
☐ ☐ OPEN PASTURE, ROWCROP (0)
☐ ☐ MINING/CONSTRUCTION (0)

BANK EROSION (Per Bank)
L R
☑ ☑ NONE / LITTLE (3)
☐ ☐ MODERATE (2)
☐ ☐ HEAVY / SEVERE (1)

COMMENTS:

Riparian **3** Max 10

5.) POOL/GLIDE AND RIFFLE/RUN QUALITY

MAX. DEPTH (Check 1 ONLY!)
☐ >1m (6)
☑ 0.7-1m (4)
☐ 0.4-0.7m (2)
☐ 0.2-0.4m (1)
☐ <0.2m (pool = 0)

MORPHOLOGY (Check 1 or 2 & AVERAGE)
☐ POOL WIDTH > RIFFLE WIDTH (2)
☑ POOL WIDTH = RIFFLE WIDTH (1)
☐ POOL WIDTH < RIFFLE WIDTH (0)

CURRENT VELOCITY (POOLS & RIFFLES!) (Check All that Apply)
☐ EDDIES (1)
☐ FAST (1)
☑ MODERATE (1)
☑ SLOW (1)
☐ TORRENTIAL (-1)
☐ INTERSTITIAL (-1)
☐ INTERMITTENT (-2)
☐ VERY FAST (1)

COMMENTS:

Pool/Current **7** Max 12

CHECK ONE OR CHECK 2 & AVERAGE

RIFFLE DEPTH
☐ *BEST AREAS >10cm (2)
☑ BEST AREAS 5-10cm (1)
☐ BEST AREAS <5cm (RIFFLE=0)

RUN DEPTH
☐ MAX >50cm (2)
☑ MAX <50cm (1)

RIFFLE/RUN SUBSTRATE
☐ STABLE (e.g., Cobble, Boulder (2)
☑ MOD. STABLE (e.g., Large Gravel (1)
☐ UNSTABLE (Fine Gravel, Sand (0)

RIFFLE/RUN EMBEDDEDNESS
☐ NONE (2)
☐ LOW (1)
☑ MODERATE (0)
☐ EXTENSIVE (-1)

COMMENTS: ☐ NO RIFFLE (Metric = 0)

Riffle/Run **3** Max 8

Gradient **4** Max 10

6.) GRADIENT (ft/mi): 1-Jan

DRAINAGE AREA (sq. mi.): 142

%POOL: 20 **%GLIDE:** 10

%RIFFLE: 20 **%RUN:** 50

Best areas must be large enough to support a population of riffle-obligate species

Is Sampling Reach Representative of the Stream? (Y/N) Yes In Not, Explain

Subjective Rating (1-10)	Aesthetic Rating (1-10)
4	4

Gradient: [X] Low [ ] Moderate [ ] High

	Gear:	Distance:	Water Clarity:	Water Stage:	Canopy % Open:
First Sampling Pass					

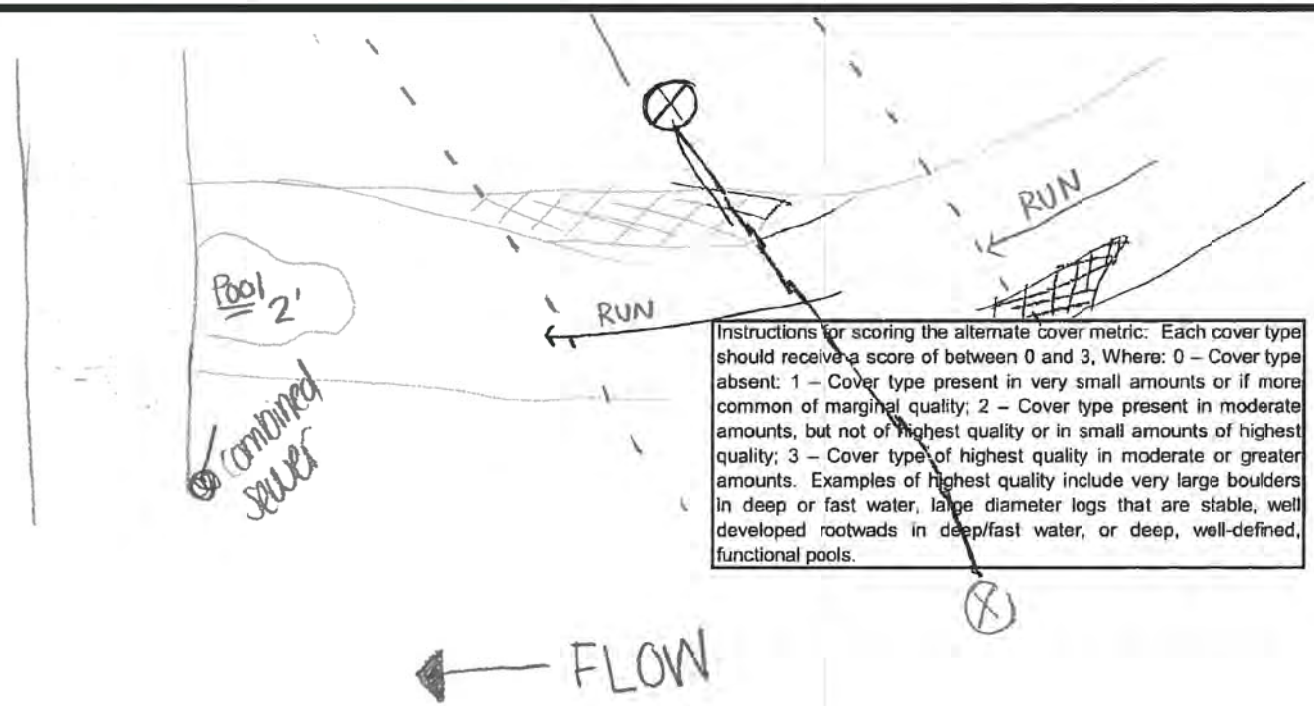
Stream Measurements:

Average Width (ft)	Average Depth (ft)	Maximum Depth (ft)	Av Bankfull Width (ft)	Bankfull Mean Depth (ft)	W/D Ratio	Bankfull Max Depth (ft)	Floodprone Area Width (ft)	Entrench. Ratio
90	5	6	90	5				0.00

Major Suspected Sources of Impacts (Check All That Apply):

- None [ ]
- Industrial [ ]
- WWTP [ ]
- Ag [ ]
- Livestock [ ]
- Silviculture [ ]
- Construction [ ]
- Urban Runoff [X]
- CSOs [ ]
- Suburban Impacts [ ]
- Mining [ ]
- Channelization [X]
- Riparian Removal [ ]
- Landfills [ ]
- Natural [ ]
- Dams [ ]
- Other Flow Alterations [ ]

Other:



Instructions for scoring the alternate cover metric: Each cover type should receive a score of between 0 and 3, Where: 0 – Cover type absent: 1 – Cover type present in very small amounts or if more common of marginal quality; 2 – Cover type present in moderate amounts, but not of highest quality or in small amounts of highest quality; 3 – Cover type of highest quality in moderate or greater amounts. Examples of highest quality include very large boulders in deep or fast water, large diameter logs that are stable, well developed rootwads in deep/fast water, or deep, well-defined, functional pools.

Yes	No	
	X	Is Stream Ephemeral (no pools, totally dry or only damp spots)?
	X	Is There Water Upstream?
		How Far:
	X	Is There Water Close Downstream?
		How Far:
	X	Is Dry Channel Mostly Natural?

Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR | MARY MERTZ, DIRECTOR

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

November 25, 2019

Cori Jansing
Cardno
11121 Canal Road
Cincinnati, Ohio 45241

Re: 19-883; Duke Energy Cumminsville Phase 5B Rebuild Project

Project: The proposed project involves removal of three existing lattice structures and replace them with updated engineered steel monopoles.

Location: The proposed project is located in the City of Cincinnati, Hamilton 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 the following records at or within a one-mile radius of the project area:

Maypop (*Passiflora incarnata*), State threatened
Black-crowned night-heron (*Nycticorax nycticorax*), State threatened
Mt. Storm Park – City of Cincinnati Parks
Mill Creek Conservancy – Mill Creek Conservancy

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. This information is provided to inform you of features present within your project area and vicinity.

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 sheepnose (*Plethobasus cyphyus*), a state endangered and federally endangered mussel, the fanshell (*Cyprogenia stegaria*), a state endangered and federally endangered mussel, the pink mucket (*Lampsilis orbiculata*), a state endangered and federally endangered mussel, the rayed bean (*Villosa fabalis*), a state endangered and federally endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, the ebonyshell (*Fusconaia ebena*), a state endangered mussel, the long-solid (*Fusconaia maculata maculata*), a state endangered mussel, the butterfly (*Ellipsaria lineolata*), a state endangered mussel, the washboard (*Megalonaias nervosa*), a state endangered mussel, the elephant-ear (*Elliptio crassidens crassidens*), a state endangered mussel, the Ohio pigtoe (*Pleurobema cordatum*), a state endangered mussel, the monkeyface (*Quadrula metanevra*), a state endangered mussel, the wartyback (*Quadrula nodulata*), a state endangered mussel, the black sandshell (*Ligumia recta*), a state threatened mussel, the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel, and the threehorn wartyback (*Obliquaria reflexa*), 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 shortnose gar (*Lepisosteus platostomus*), a state endangered fish, the shoal chub (*Macrhybopsis hyostoma*), a state endangered fish, the shovelnose sturgeon (*Scaphirhynchus platorynchus*), a state endangered fish, the lake sturgeon (*Acipenser fulvescens*), a state endangered fish, the northern madtom (*Noturus stigmosus*), a state endangered fish, the bigeye shiner (*Notropis boops*) a state threatened fish, the mountain madtom (*Noturus eleutherus*), a state threatened fish, the river darter (*Percina shumardi*) a state threatened fish, the channel darter (*Percina copelandi*), a state threatened fish, the blue sucker (*Cycleptus elongatus*), a state threatened fish, and the paddlefish (*Polyodon spathula*) a state threatened fish. 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 meadows and other wetlands. 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 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 American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. Due to the location, the type of habitat present at the project site, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. In the Oak Openings area west of Toledo, lark sparrows occupy open grass and shrubby fields along sandy beach ridges. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. Due to the location, the type of habitat present at the project site, and the type of 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

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 if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

Cori Jansing

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>
Sent: Tuesday, October 29, 2019 9:19 AM
To: Cori Jansing
Cc: nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us
Subject: Duke Energy, Cumminsville Phase 5B Rebuild Project, Hamilton County

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# 03E15000-2020-TA-0141

Dear Ms. Jansing,

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

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

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

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

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

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

Sincerely,

Patrice M. Ashfield,
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW

Kate Parsons, ODNR-DOW

From:	Danielle Thompson
To:	"tim.gilday@hamilton-co.org"; "mottley@taftlaw.com"
Cc:	Cori Jansing
Subject:	Duke Energy Cumminsville Phase 5B Rebuild MVCD Inquiry
Date:	Friday, February 7, 2020 10:15:56 AM
Attachments:	DE_OPSB3__Cumminsville_Environmental Access Plan.pdf image002.png image003.png image004.png image005.png

---

Mr. Gilday/ Mr. Mottley,

I am currently working on Cumminsville Phase 5B Rebuild Project for Duke Energy located in City of Cincinnati, Hamilton County, Ohio. Three Lattice structures are being replaced with updated engineered steel monopoles. Structure M11-X2-31A (39.9910, -84.2955) Structure M11-X1-31 (39.1530, -84.5401) and Structure M11-X1-32 (39.9903, -84.2931) will be replaced and upgraded. There may be some minimal vegetation clearing and trimming, but the work will be done by hand, debris removed, and roots left in place. Erosion and sediment controls will be used during construction, and the Project area will be fully restored once construction is complete (smoothing ruts, reseeding, etc.). I currently estimate approximately >0.5 Ac. of ground disturbance associated with the project. I am aware that this project falls under the jurisdiction of the City of Cincinnati. My research indicates than excavation and fill permit could be required. I want to make sure we advise Duke on the correct level of coordination. Please let me know if activities associated with this project will require any additional review or permits. I've attached the project maps for your review. Please let me know if you have any questions or need any additional information.

Thank you for your help.

Best,
Danielle

Danielle K. Thompson
SENIOR PROJECT MANAGER
CARDNO

Cardno

Please be aware, my mobile number has changed to 513-404-6251

Direct +1 513 233 7036 Mobile +1 513 404 6251
Address 11121 Canal Rd. Suite 200, Sharonville, OH 45241
Email danielle.thompson@cardno.com Web www.cardno.com

CONNECT WITH CARDNO

This email and its attachments may contain confidential and/or privileged information for the sole use of the intended recipient(s). All electronically supplied data must be checked against an applicable hardcopy version which shall be the only document which Cardno warrants accuracy. If you are not the intended recipient, any use, distribution or copying of the information contained in this email and its attachments is strictly prohibited. If you have received this email in error, please email the sender by replying to this message and immediately delete and destroy any copies of this email and any attachments. The views or opinions expressed are the author's own and may not reflect the views or opinions of Cardno.

Attachment D – Regulated Waters Delineation Report

Regulated Waters Delineation Report

Cumminsville Phase 5B Rebuild Project

City of Cincinnati, Hamilton County, Ohio

November 6, 2019

Cardno

Document Information

Prepared for	Duke Energy Ohio
Client Contact	Dustin Geisler
Project Name	Cumminsville Phase 5B Rebuild Project
Project Number	Cardno #J156721M04
Project Manager	Cori Jansing (Cardno)
Date	November 6, 2019

Prepared for:

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

Prepared by:

Cardno
11121 Canal Road, Cincinnati, Ohio 45241

Table of Contents

1 Introduction 1

2 Regulatory Definitions 1

2.1 Waters of the United States 1

2.2 Waters of the State 3

2.3 Wetlands 3

2.4 Streams, Rivers, Watercourses & Jurisdictional Ditches 6

2.5 Endangered Species Act 6

3 Background Information 6

3.1 Existing Maps 6

4 Methodology and Description 7

4.1 Regulated Waters Investigation 7

4.2 Technical Descriptions 8

4.3 Endangered, Threatened and Rare Species 8

5 Jurisdictional Analysis 9

5.1 U.S. Army Corps of Engineers 9

5.2 Ohio Environmental Protection Agency 9

6 Summary and Conclusion 10

6.1 Summary 10

6.2 Conclusion 11

7 References 12

Appendices

Appendix A Site Photographs

Appendix B Ohio QHEI Data Sheets

Appendix C Endangered, Threatened, and Rare Species Agency Coordination

Tables

Table 6-1 Features Identified within the Cumminsville Phase 5B Rebuild Project Study Area 10

Figures

Figure 1 Project Location Map

Figure 2 National Wetland Inventory (NWI) Map

Figure 3 Soil Survey Map

Figure 4 Waters of the U.S. Delineation Map

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 SystemAcronyms, continued
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	Ohio Department of Natural Resources
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 within the Duke Energy Ohio Cumminsville Phase 5B Rebuild Project Study Area and potential access points (total 6.02 acres) in the City of Cincinnati, Hamilton County, Ohio. The fieldwork for this task was performed on September 12, 2019.

The total size of the Study Area was approximately 6.02 acres with an actual Project earth disturbance potential of approximately 0.7 acres. The Cumminsville Phase 5B Rebuild Project initiates at the Duke Energy Ohio's Structure M11-X2-31A located southeast of the junction of Colerain Avenue and South Grove Avenue and west of Mill Creek (39.154056, -84.541154) and terminates at Structure M11-X1-32 located north of South Ludlow Avenue (SR-127) and directly east of Interstate (I) 75 (39.154372, -84.537293). The Study Area consisted of four habitat types: urban turf/impervious surfaces, scrub-shrub, secondary growth forest and maintained right-or-way (ROW)/ new field vegetation assemblages. The Study Area is located within the Mill Creek below Mitchel Avenue to the Ohio River watershed (14-digit HUC 05090203-010-050).

This report identifies the jurisdictional status of aquatic features identified within 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: Eastern Mountains and Piedmont Region Version 2.0 (Environmental Laboratory, 2012) 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 Eastern Mountains and Piedmont 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 (ODNR) 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 2) did not identify any identified wetland features within the Study Area.

3.1.2 National Hydrography Dataset

The NHD map of the area (Figure 2) identified one (1) stream (Mill Creek) within the Study Area.

3.1.3 Soil Survey

The NRCS Soil Survey identified five (5) soil types located within the 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 Cumminsville Phase 5B Rebuild Project Study Area

Symbol	Description	Hydric
PfE	Pale silty clay loam, 25 to 35 percent slopes	No
Ur	Urban land	No
UrUXC	Urban land-Udorthents complex, 0 to 12 percent slopes	No
UsUXF	Urban land-Udorthents complex, smoothed, 0 to 50 percent slopes	No
W	Water	No

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: Eastern Mountains and Piedmont Region Version 2.0* (Environmental Laboratory, 2012) as required by current USACE policy.

Prior to the fieldwork, 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

The project included the review of a 150-ft wide survey corridor approximately 0.27 mile long (the "Study Area"), located in the City of Cincinnati, Hamilton County, Ohio (see Figure 1). The Study Area consists of approximately 6.02 acres, with an actual project earth disturbance potential of approximately 0.7 acres. The Cumminsville Phase 5B Rebuild Project initiates at Duke Energy Ohio structure M11-X2-31A (39.154056, -84.541154) and terminates at Duke Energy Ohio structure M11-X1-32 (39.144372, -84.537293) situated north of the I-74 and I-75 interchange. The Study Area consisted of four habitat types: urban turf/impervious surfaces, scrub-shrub, secondary growth forest and maintained right-or-way (ROW)/ new field vegetation assemblages. . The Study Area is located within the Mill Creek below Mitchel Avenue to the Ohio River watershed (14-digit HUC 05090203-010-050).

Wetland and Stream Descriptions

Mill Creek

Mill Creek is a perennial stream located southeast of Duke Energy Structure M11-X2-31A and northwest of Duke Energy Structure M11-X1-31. This stream was at base flow conditions at the time of the stream survey. The dominant substrates were gravel, sand, and silt. The Ordinary High Water Mark (OHWM) width was 90 feet and the depth was 5 to 6 feet. The maximum pool depth observed was approximately 2.5 feet. Mill Creek is a Traditional Navigable Water (TNW) south of the proposed Project. Therefore, Mill Creek should be considered a jurisdictional water of the United States. Mill Creek had a QHEI score of 40.5 (Appendix B). This stream is a designated Warm Water Habitat (WWH).

4.3 Endangered, Threatened and Rare Species

The potential for listed species known to occur within Hamilton County were evaluated based on the habitat observed within the Study Area. In addition, high quality natural communities and significant natural habitat areas were documented if encountered. 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 (ODNR) Division of Wildlife occurred as it related to the Natural Heritage Database search results for the Study Area (Appendix C).

Tables summarizing the results of ETR species as they relate to the habitat observed within the Study Area are included with this report. Correspondence with the ODNR DOW and the USFWS regarding RTE located within a ½-mile of the Study Area were sent September 23, 2019. The ODNR-DOW and USFWS data request receipts are located in Appendix C.

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). If applicable, correspondence from USFWS regarding Indiana bat and northern long-eared bat is included within Appendix C.

Suitable bat roost habitat was not observed within wooded the areas bordering the actively maintained ROW adjacent to the Cumminsville Phase 5B Rebuild Project Study Area.

Running Buffalo Clover Habitat

Running buffalo clover (*Trifolium stoloniferum*, federally endangered) is protected under the Endangered Species Act, which is overseen by the USFWS. Typical guidance from USFWS regarding potential running buffalo clover habitat is avoidance or relocation. Potential running buffalo clover habitat includes partially shaded woodlots, mowed areas (lawns, parks, cemeteries), and along streams and trails. Periodic disturbance and a somewhat open habitat is needed for running buffalo clover to flourish but cannot tolerate full-sun, full-shade, or severe disturbance.

Based on our field inspection and our best professional judgment, no running buffalo clover habitat or individuals were observed within the Cumminsville Phase 5B Rebuild Project Study Area. The secondary deciduous forest dominant understory vegetation contained a closed canopy and the maintained ROW contained full-sun.

5 Jurisdictional Analysis

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 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 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 Cumminsville Phase 5B Rebuild Project Study Area on September 12, 2019

6.1.1 Wetlands and Waterways

One stream (Mill Creek), and no wetlands were identified within the Cumminsville Phase 5B Rebuild Project Study Area

Table 6-1 Features Identified within the Cumminsville Phase 5B Rebuild Project Study Area

Feature Name	USGS/ NWI Identified	Feature Class	Regulatory Status[1]	Riffles / Pools	Dimensions (ft)		Substrate	QHEI Score	Linear Footage (LF)	Acreage (AC)
					Width	Depth				
Mill Creek	Yes	Perennial	Jurisdictional	Yes	90	5-6	G-Sa-Si	40.5	150	0.31
Totals			Streams		Jurisdictional		Perennial		150 LF	0.31 AC

[1] Regulatory Status is based on our "professional judgment" and 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 Hamilton County and their potential to occur within the Study Area based on their habitat requirements and field observations.

Correspondence with the ODNR DOW and the USFWS regarding RTE located within a ½-mile of the Study Area were sent September 23, 2019. The ODNR-DOW and USFWS data request receipts are located in Appendix C.

6.1.3 Indiana Bat and Northern Long-eared Bat Roost Habitat

The entire 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, there are no potential roost or maternity roost trees suitable for harboring Indiana bats and northern long-eared bats within the Study Area.

In the event tree clearing activity becomes a work priority within the Study Area, it is recommended that a field inspection be performed within the clearing limits to ensure that potential bat habitat has not developed.

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. A letter based on the field observations was submitted to the USFWS for concurrence on September 23, 2019. The USFWS data request receipt is located in Appendix C.

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

Environmental Laboratory. 1987. *U.S. Army Corps of Engineers' Wetland Delineation Manual*, Technical Report Y-87-1, U.S. Waterways Experiment Station, Vicksburg, MS.

Environmental Laboratory. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region*, ERDC/EL TR-12-19, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Gleason, H.A. and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada.* 2nd Edition. The New York Botanical Garden. Bronx, NY.

Lichvar, R.W. 2013. The National Wetland Plant List: 2013 Wetland Ratings. Phytoneuron 2013-49: 1-241. Published July 17, 2013. ISSN 2153 733X.

Lichvar, R.W., and John T. Kartesz. 2009. *North American Digital Flora: National Wetland Plant List, version 2.4.0* (https://wetland_plants.usace.army.mil). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH, and BONAP, Chapel Hill, NC.

Lichvar, R., Melvin, N.C., Butterwick, M.L. and Kirchner, W.N. 2012. *National Wetland Plant List Indicator Rating Definitions.* ERDC/CRREL TN-12-1. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. http://www.fws.gov/wetlands/documents/National-Wetland-Plant-List-Indicator-Rating-Definitions.pdf

Ohio Environmental Protection Agency, Division of Surface Water. 2009. Biological and Water Quality Study of the Lower Little Miami River and Selected Tributaries 2007 Including the Todd Fork Subwatershed.
(https://www.epa.state.oh.us/portals/35/documents/lowerlittlemiamirivertsd2007.pdf)

Reed, P. B., Jr. 1988. National List of Plant Species that Occur in Wetlands: 1988. Washington, DC: U.S. Fish and Wildlife Service.

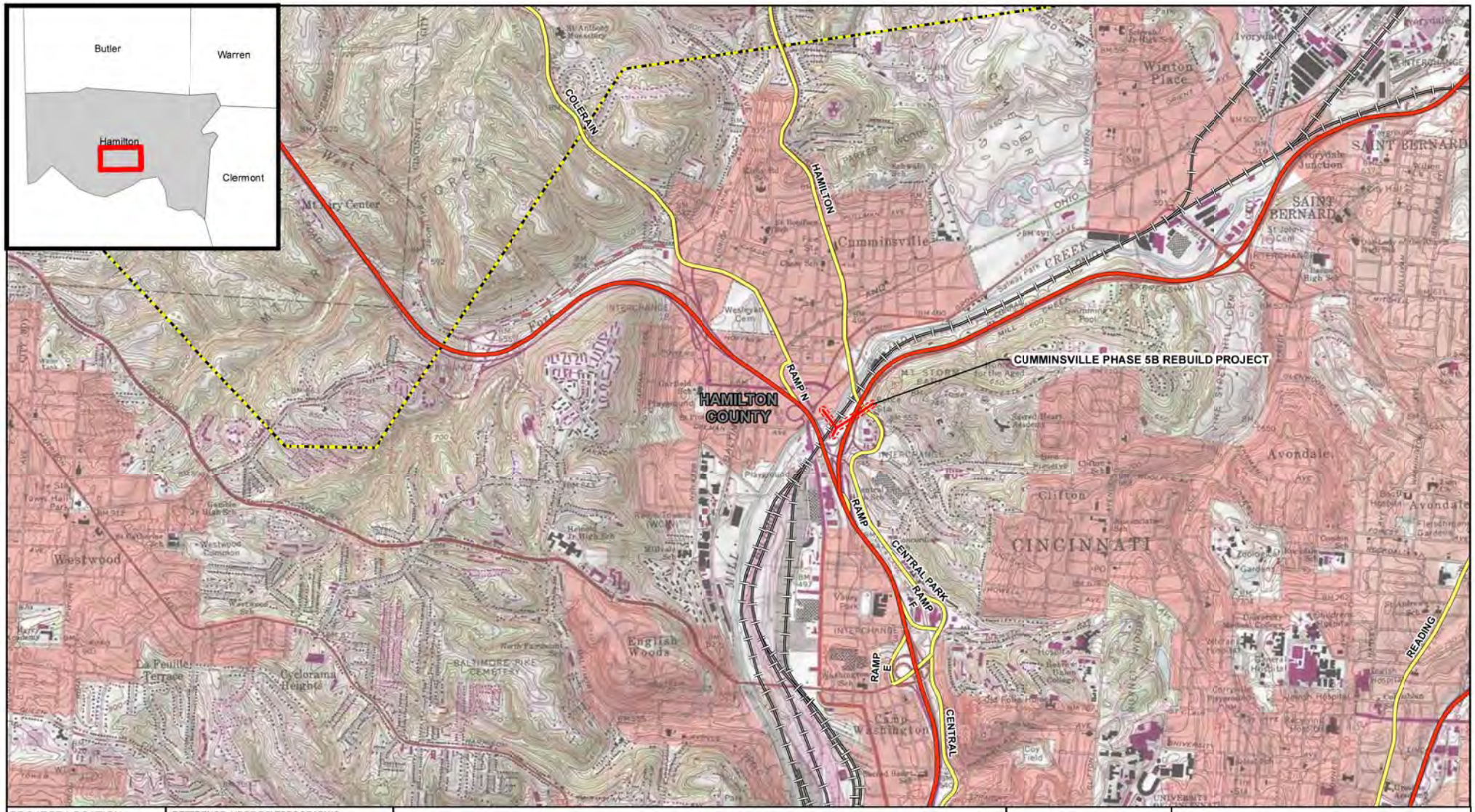
United States Department of Agriculture, Natural Resource Conservation Service (NRCS). Web Soil Survey. Soil Survey of Hamilton County, OH.

United States Environmental Protection Agency (EPA). 2015. Connectivity of Streams & Wetlands to Downstream Waters: A Review & Synthesis of the Scientific Evidence (http://www.epa.gov/cleanwaterrule)

United States Environmental Protection Agency (EPA). 2015. Technical Support Document for the Clean Water Rule: Definition of Waters of the United States (http://www.epa.gov/cleanwaterrule)

DUKE ENERGY OHIO
CUMMINSVILLE PHASE 5B
REBUILD PROJECT
WETLAND DELINEATION REPORT

FIGURES



PROJECT LOCATION

HAMILTON COUNTY, OH

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE:CINCINNATI WEST, OHIO. OBTAINED VIAESRI USA TOPO, NATIONAL GEOGRAPHIC TOPO, AND USGS, ACCESSED 01/2017.

- Existing Facility
- Interstate
- State Highway
- US Highway
- Railroad
- Project Centerline
- 150-ft Corridor
- County Boundary
- Municipal Boundary

DUKE ENERGY.

Cardno

0 500 1,000 2,000 Feet

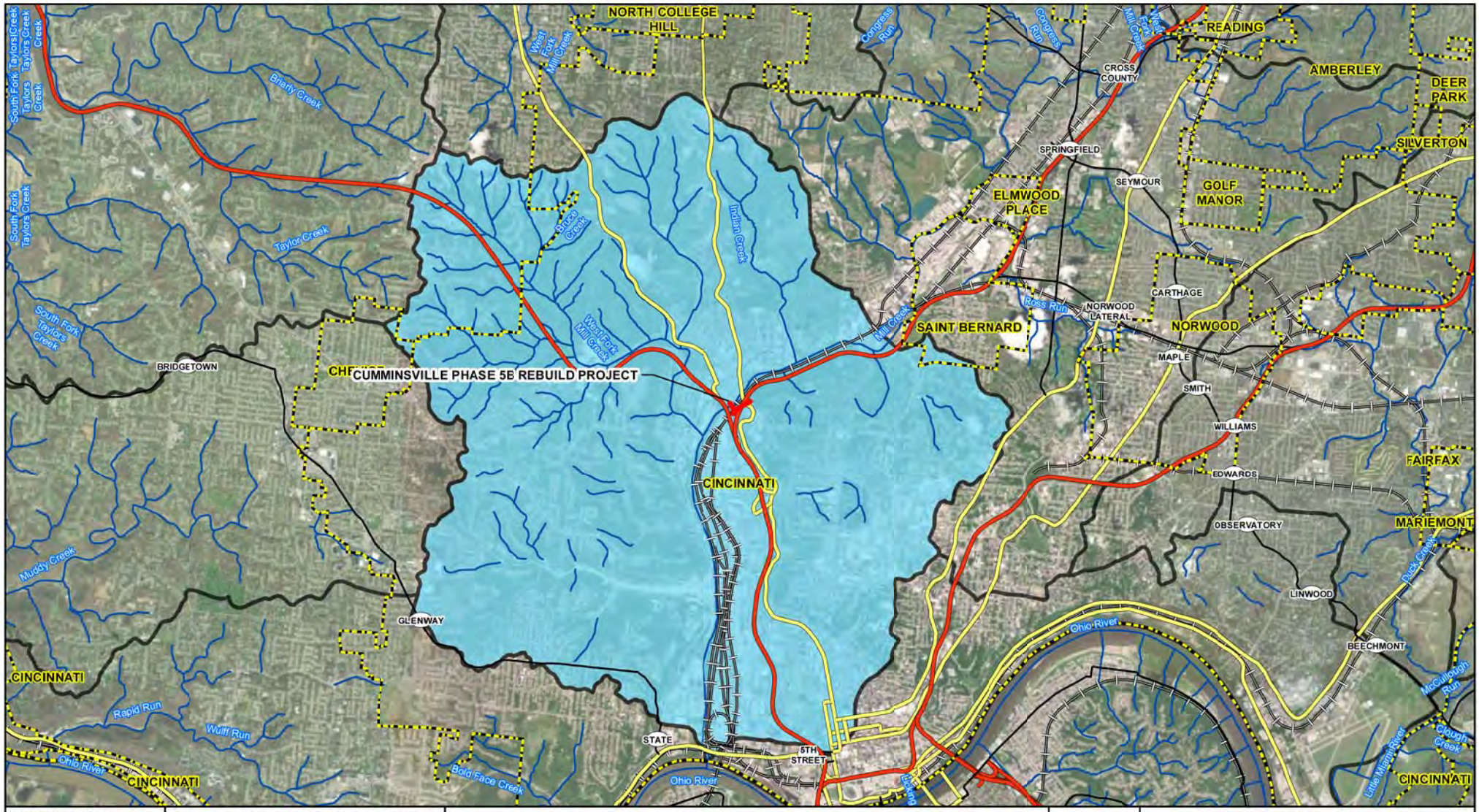
FIGURE 1
PROJECT VICINITY MAP
CUMMINSVILLE PHASE 5B REBUILD PROJECT
REGULATED WATERS DELINEATION REPORT

DUKE ENERGY OHIO

DRAWN BY: COD
CHECKED: CAJ

DATE: 2/10/2020
APPROVED: CAJ

R:\Projects\15\156\156721M_DukeEnergy_9193\M04_SOW59_M19013301_Cumminsville5B\GIS\MXD\Delineation\WDR_F1_Cumminsville_Project Vicinity Map.mxd



PROJECT LOCATION

HAMILTON COUNTY, OH

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE: CINCINNATI WEST, OHIO. OBTAINED VIA ESRI USA TOPO, NATIONAL GEOGRAPHIC TOPO, AND USGS, ACCESSED 01/2017.

N

0 3,000 6,000 12,000 Feet

- Existing Facility
- Project Centerline
- Municipal Boundary
- Interstate
- State Highway
- US Highway
- Railroad
- NHD Flowline
- Adjacent Watersheds
- Mill Creek from Mitchell Ave. to Ohio R.

DUKE ENERGY.

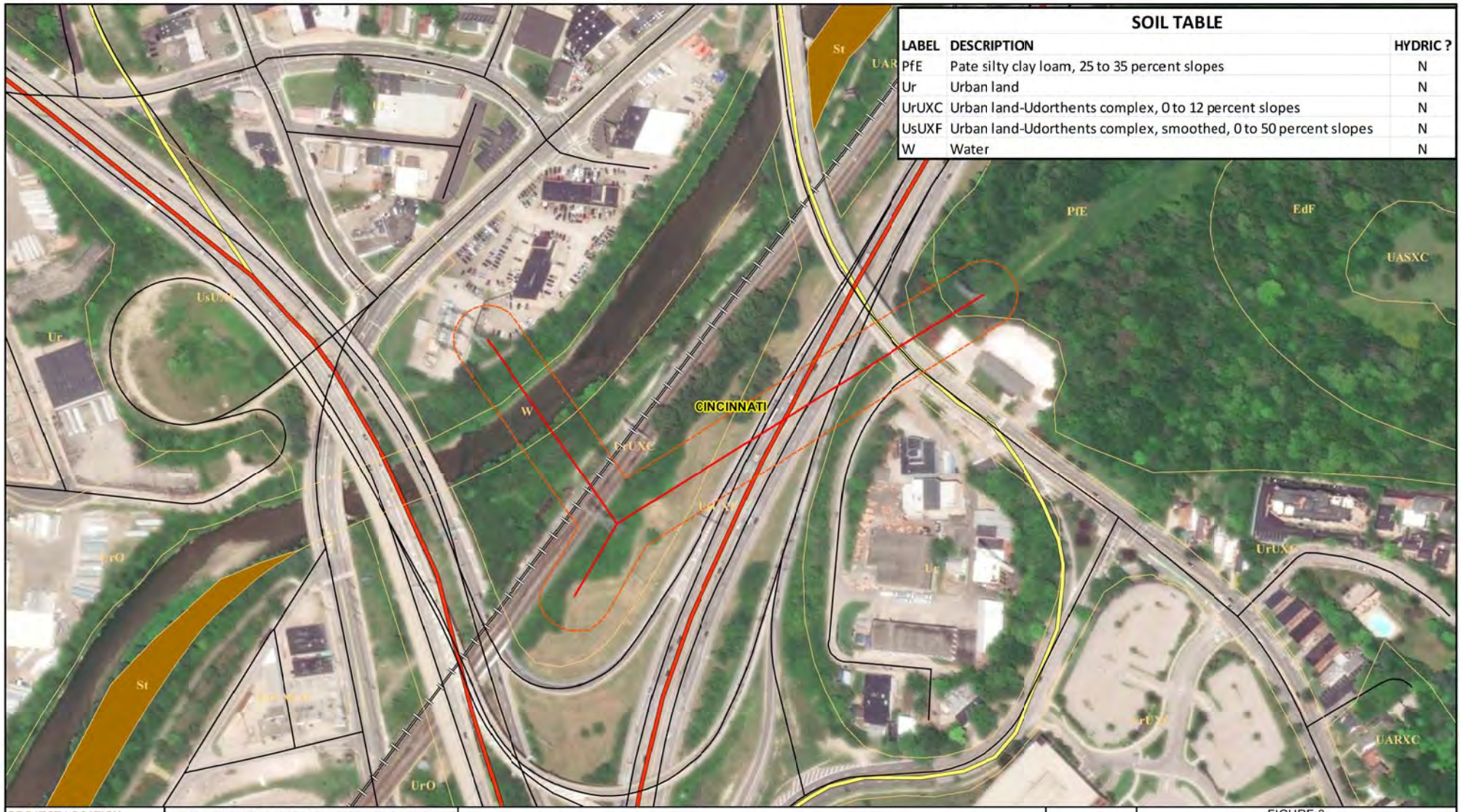
Cardno

FIGURE: 2
PROJECT AREA WATERSHEDS WITH NHD OVERLAY
CUMMINSVILLE PHASE 5B REBUILD PROJECT
REGULATED WATERS DELINEATION REPORT

DUKE ENERGY OHIO

DRAWN BY: COD DATE: 2/10/2020
CHECKED: CAJ APPROVED: CAJ

R:\Projects\15\156\156721M_DukeEnergy_9193\M04_SOW59_M19013301_Cumminsville5B\GIS\MXD\Delineation\WDR_F2_Cumminsville_Watersheds.mxd



SOIL TABLE

LABEL	DESCRIPTION	HYDRIC ?
PfE	Pate silty clay loam, 25 to 35 percent slopes	N
Ur	Urban land	N
UrUXC	Urban land-Udorthents complex, 0 to 12 percent slopes	N
UsUXF	Urban land-Udorthents complex, smoothed, 0 to 50 percent slopes	N
W	Water	N

PROJECT LOCATION

HAMILTON COUNTY, OH

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE: CINCINNATI WEST, OHIO. OBTAINED VIA ESRI USA TOPO, NATIONAL GEOGRAPHIC TOPO, AND USGS, ACCESSED 01/2017.

N

0 112.5 225 450 Feet

Existing Facility
Project Centerline
150ft Corridor
Municipal Boundary
Soil Unit
Soil Unit - Hydric
Interstate
State Highway
US Highway
Railroad

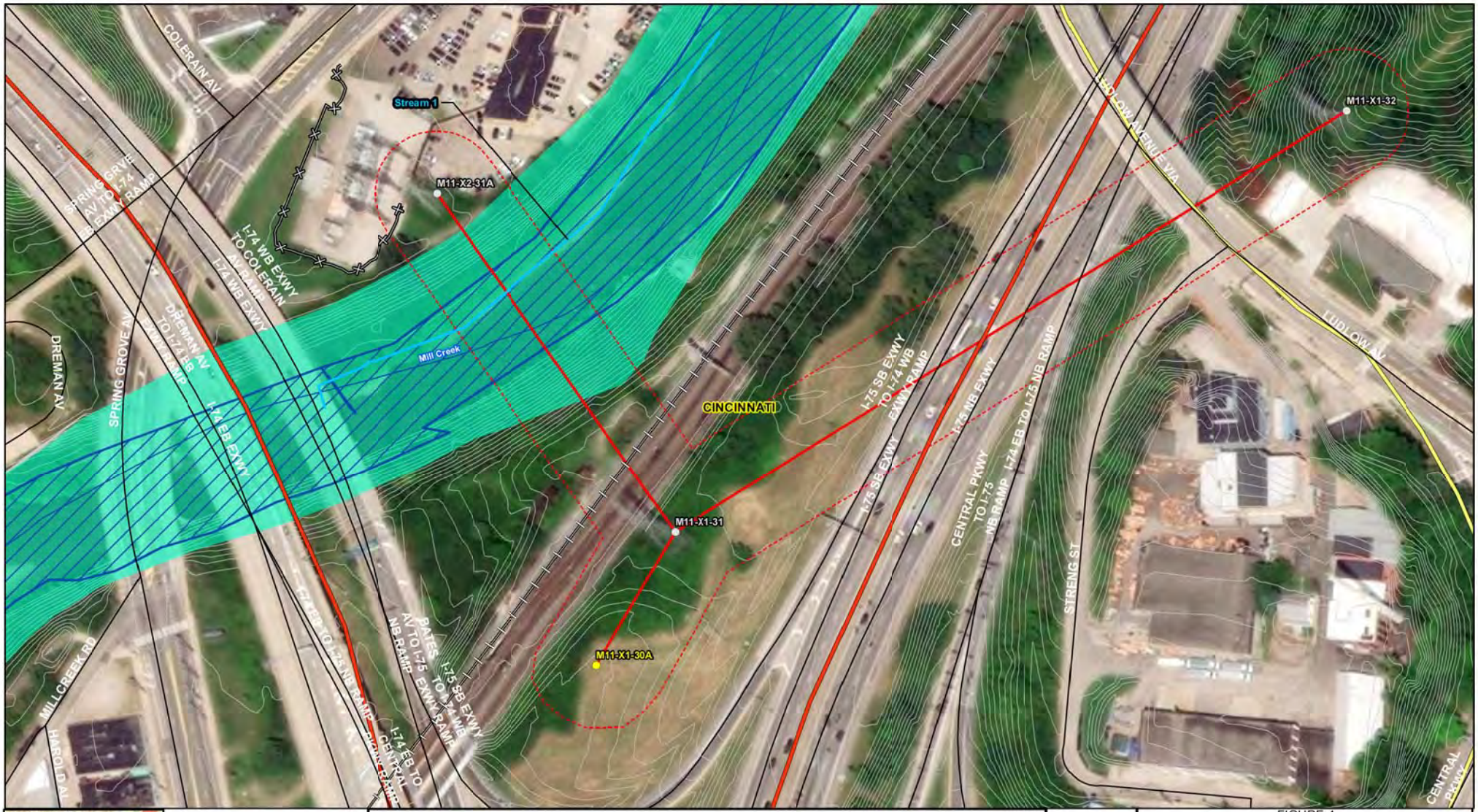
DUKE ENERGY.
Cardno

FIGURE:3
SOIL CLASSIFICATIONS
CUMMINSVILLE PHASE 5B REBUILD PROJECT
REGULATED WATERS DELINEATION REPORT

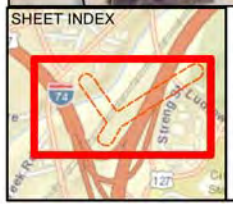
DUKE ENERGY OHIO

DRAWN BY: COD DATE: 2/10/2020
CHECKED: CAJ APPROVED: CAJ

R:\Projects\15\156\156721M_DukeEnergy_9193\M04_SOW59_M19013301_Cumminsville5B\GIS\MXD\Delineation\WDR_F3_Cumminsville_Soil_.mxd



SHEET INDEX



REFERENCE:
ESRI WORLD IMAGERY, OBTAINED THROUGH ESRI WORLD IMAGERY MICROSOFT CORPORATION, ACCESSED 01/2017

N

0 40 80 160 Feet

- Existing Facility
- Fence Line
- Delineated Stream
- 150-ft Corridor
- Local Road
- Interstate
- State Highway
- US Highway
- Railroad
- Existing Structure
- Proposed Structure
- Project Centerline
- NWI Wetlands
- NHD Flowline
- Floodway
- 100-year Floodplain
- 2' Contour Line

DUKE ENERGY.

Cardno

FIGURE 4.
IDENTIFIED FEATURES MAP
CUMMINSVILLE PHASE 5B REBUILD PROJECT
REGULATED WATERS DELINEATION REPORT

DUKE ENERGY OHIO

DRAWN BY: COD
CHECKED: CAJ
DATE: 2/10/2020
APPROVED: CAJ

R:\Projects\15\156\156721M_DukeEnergy_9193\M04_SOW59_M19013301_Cumminsville5B\GIS\MXD\Delineation\WDR_F4_Cumminsville_Delineation.mxd

DUKE ENERGY OHIO
CUMMINSVILLE PHASE 5B
REBUILD PROJECT
WETLAND DELINEATION REPORT

APPENDIX

A

SITE PHOTOGRAPHS

Photo 1. Mill Creek, View Looking Upstream, 09/12/2019.

Photo 2. Mill Creek, View Looking Downstream, 09/12/2019.

Photo 3. Mill Creek and Power Lines View Looking North East, 09/12/2019.

Photo 4. Transmission Tower, View Looking North, 09/12/2019.

DUKE ENERGY OHIO
CUMMINSVILLE PHASE 5B
REBUILD PROJECT
WETLAND DELINEATION REPORT

APPENDIX

B

OHIO QHEI DATA SHEETS

Qualitative Habitat Evaluation Index Field Sheet

QHEI Score: 40.5

River Code: **RM:** **Stream:** Mill Creek

Date: 9/12/2019 **Location:** (39.153535, -84.541432)

Scorers Full Name: Cori Jansing / Jon Nielsen **Affiliation:** Cardno INC.

1.) SUBSTRATE

(Check ONLY Two Substrate TYPE BOXES; Estimate % present)

TYPE		Pool	Riffle			Pool	Riffle
☐	☐ BLDR/SLBS (10)			☐	☑ GRAVEL (7)	25	50
☐	☐ BOULDER (9)			☑	☐ SAND (6)	40	35
☐	☐ COBBLE (8)			☐	☐ BEDROCK (5)		
☐	☐ HARDPAN (4)			☐	☐ DETRITUS (3)		
☐	☐ MUCK (2)			☐	☐ ARTIFICIAL (0)	10	
☐	☐ SILT (2)	25	15				

NOTE: Ignore Sludge Originating From Point Sources

NUMBER OF SUBSTRATE TYPES: (High Quality Only, Score 5 or >)
☐ 4 or More (2)
☑ 3 or Less (0)

COMMENTS:

SUBSTRATE ORIGIN Check ONE (OR 2 & AVERAGE)
☑ LIMESTONE (1)
☐ TILLS (1)
☐ WETLANDS (0)
☐ HARDPAN (0)
☐ SANDSTONE (0)
☐ RIP/RAP (0)
☐ LACUSTRINE (0)
☐ SHALE (-1)
☐ COAL FINES (-2)

SUBSTRATE QUALITY Check ONE (OR 2 & AVERAGE)

SILT:
☐ SILT HEAVY (-2)
☑ SILT MODERATE (-1)
☐ SILT NORMAL (0)
☐ SILT FREE (1)

EMBEDDEDNESS:
☐ EXTENSIVE (-2)
☑ MODERATE (-1)
☐ NORMAL (0)
☐ NONE (1)

Substrate **12** Max 20

2.) INSTREAM COVER

(Give each cover type a score of 0 to 3; see back for instructions)

(Structure)
0 UNDERCUT BANKS (1)
0 OVERHANGING VEGETATION (1)
0 SHALLOWS (IN SLOW WATER) (1)
0 ROOTMATS (1)

TYPE: Score All that Occur
2 POOLS >70 cm (2)
0 ROOTWADS (1)
0 BOULDERS (1)
0 OXBOWS, BACKWATERS (1)
0 AQUATIC MACROPHYTES (1)
0 LOGS AND WOODY DEBRIS (1)

COMMENTS:

AMOUNT: (Check ONLY One or Check 2 & AVERAGE)
☐ EXTENSIVE >75% (11)
☐ MODERATE 25-75% (7)
☐ SPARSE 5-25% (3)
☑ NEARLY ABSENT <5%

Cover **3** Max 20

3.) CHANNEL MORPHOLOGY

(Check ONLY One per Category OR Check 2 & AVERAGE)

SINUOSITY
☐ HIGH (4)
☐ MODERATE (3)
☐ LOW (2)
☑ NONE (1)

DEVELOPMENT
☐ EXCELLENT (7)
☐ GOOD (5)
☐ FAIR (3)
☑ POOR (1)

CHANNELIZATION
☐ NONE (6)
☑ RECOVERED (4)
☑ RECOVERING (3)
☐ RECENT OR NO RECOVERY (1)

STABILITY
☑ HIGH (3)
☐ MODERATE (2)
☐ LOW (1)

MODIFICATIONS / OTHER
☐ SNAGGING
☐ RELOCATION
☐ CANOPY REMOVAL
☐ DREDGING
☐ ONE SIDE CHANNEL MODIFICATIONS
☐ IMPOUND
☐ ISLANDS
☐ LEVEED
☐ BANK SHAPING

COMMENTS:

Channel **8.5** Max 20

4.) RIPARIAN ZONE AND BANK EROSION

(Check ONE box per bank OR Check 2 & AVERAGE per bank)

River Right Looking Downstream

RIPARIAN WIDTH (Per Bank)
L R
☐ ☐ WIDE >50M (4)
☐ ☐ MODERATE 10-50M (3)
☐ ☐ NARROW 5-10M (2)
☐ ☐ VERY NARROW <5M (1)
☑ ☑ NONE (0)

FLOOD PLAIN QUALITY (Past 100 ft Riparian) (Most Predominant Per Bank)
L R
☐ ☐ FOREST, SWAMP (3)
☐ ☐ SHRUB OR OLD FIELD (2)
☐ ☐ RESIDENTIAL, PARK, NEW FIELD (1)
☐ ☐ FENCED PASTURE (1)
☐ ☐ CONSERVATION TILLAGE (1)
☑ ☑ URBAN OR INDUSTRIAL (0)
☐ ☐ OPEN PASTURE, ROWCROP (0)
☐ ☐ MINING/CONSTRUCTION (0)

BANK EROSION (Per Bank)
L R
☑ ☑ NONE / LITTLE (3)
☐ ☐ MODERATE (2)
☐ ☐ HEAVY / SEVERE (1)

COMMENTS:

Riparian **3** Max 10

5.) POOL/GLIDE AND RIFFLE/RUN QUALITY

MAX. DEPTH (Check 1 ONLY!)
☐ >1m (6)
☑ 0.7-1m (4)
☐ 0.4-0.7m (2)
☐ 0.2-0.4m (1)
☐ <0.2m (pool = 0)

MORPHOLOGY (Check 1 or 2 & AVERAGE)
☐ POOL WIDTH > RIFFLE WIDTH (2)
☑ POOL WIDTH = RIFFLE WIDTH (1)
☐ POOL WIDTH < RIFFLE WIDTH (0)

CURRENT VELOCITY (POOLS & RIFFLES!) (Check All that Apply)
☐ EDDIES (1)
☐ FAST (1)
☑ MODERATE (1)
☑ SLOW (1)
☐ TORRENTIAL (-1)
☐ INTERSTITIAL (-1)
☐ INTERMITTENT (-2)
☐ VERY FAST (1)

COMMENTS:

Pool/Current **7** Max 12

CHECK ONE OR CHECK 2 & AVERAGE

RIFFLE DEPTH
☐ *BEST AREAS >10cm (2)
☑ BEST AREAS 5-10cm (1)
☐ BEST AREAS <5cm (RIFFLE=0)

RUN DEPTH
☐ MAX >50cm (2)
☑ MAX <50cm (1)

RIFFLE/RUN SUBSTRATE
☐ STABLE (e.g., Cobble, Boulder (2)
☑ MOD. STABLE (e.g., Large Gravel (1)
☐ UNSTABLE (Fine Gravel, Sand (0)

RIFFLE/RUN EMBEDDEDNESS
☐ NONE (2)
☐ LOW (1)
☑ MODERATE (0)
☐ EXTENSIVE (-1)

COMMENTS: ☐ NO RIFFLE (Metric = 0)

Riffle/Run **3** Max 8

Gradient **4** Max 10

6.) GRADIENT (ft/mi): 1-Jan

DRAINAGE AREA (sq. mi.): 142

%POOL: 20 **%GLIDE:** 10

%RIFFLE: 20 **%RUN:** 50

Best areas must be large enough to support a population of riffle-obligate species

Is Sampling Reach Representative of the Stream? (Y/N) Yes In Not, Explain

Subjective Rating (1-10)	Aesthetic Rating (1-10)
4	4

Gradient: [X] Low [ ] Moderate [ ] High

	Gear:	Distance:	Water Clarity:	Water Stage:	Canopy % Open:
First Sampling Pass					

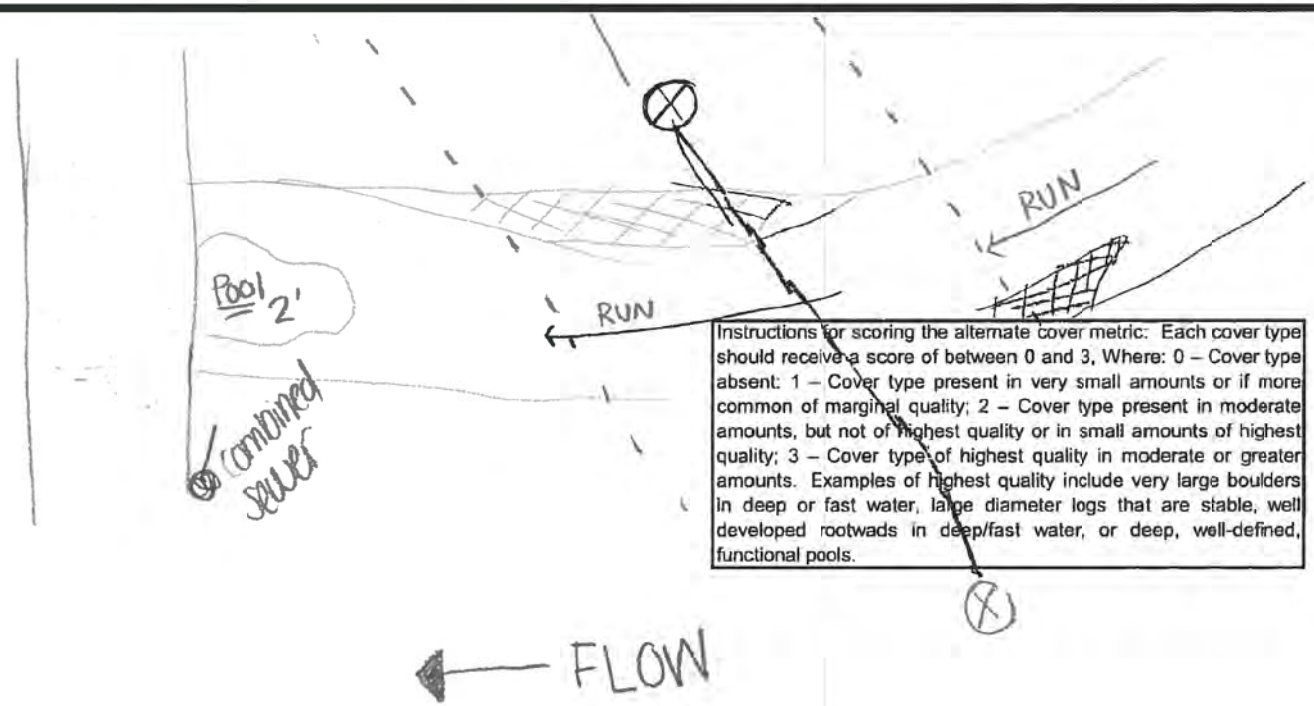
Stream Measurements:

Average Width (ft)	Average Depth (ft)	Maximum Depth (ft)	Av Bankfull Width (ft)	Bankfull Mean Depth (ft)	W/D Ratio	Bankfull Max Depth (ft)	Floodprone Area Width (ft)	Entrench. Ratio
90	5	6	90	5				0.00

Major Suspected Sources of Impacts (Check All That Apply):

- None [ ]
- Industrial [ ]
- WWTP [ ]
- Ag [ ]
- Livestock [ ]
- Silviculture [ ]
- Construction [ ]
- Urban Runoff [X]
- CSOs [ ]
- Suburban Impacts [ ]
- Mining [ ]
- Channelization [X]
- Riparian Removal [ ]
- Landfills [ ]
- Natural [ ]
- Dams [ ]
- Other Flow Alterations [ ]

Other:



Instructions for scoring the alternate cover metric: Each cover type should receive a score of between 0 and 3, Where: 0 – Cover type absent: 1 – Cover type present in very small amounts or if more common of marginal quality; 2 – Cover type present in moderate amounts, but not of highest quality or in small amounts of highest quality; 3 – Cover type of highest quality in moderate or greater amounts. Examples of highest quality include very large boulders in deep or fast water, large diameter logs that are stable, well developed rootwads in deep/fast water, or deep, well-defined, functional pools.

Yes	No	
	X	Is Stream Ephemeral (no pools, totally dry or only damp spots)?
	X	Is There Water Upstream?
		How Far:
	X	Is There Water Close Downstream?
		How Far:
	X	Is Dry Channel Mostly Natural?

DUKE ENERGY OHIO
CUMMINSVILLE PHASE 5B
REBUILD PROJECT
WETLAND DELINEATION REPORT

APPENDIX

C

ENDANGERED, THREATENED, AND RARE SPECIES AGENCY COORDINATION

Cori Jansing

From: EnvironmentalReviewRequest@dnr.state.oh.us
Sent: Thursday, October 10, 2019 1:35 PM
To: Cori Jansing
Subject: Thank you for contacting the Ohio Department of Natural Resources

Thank you for contacting the Ohio Department of Natural Resources. This email is your receipt that we have received your message and/or project review request. During normal business operations, we strive to respond to your request within 30 to 45 business days. However, during certain times of the year, due to large volumes of requests, our response time may be longer. If you have any questions please contact our office at 614-265-6397.

Sincerely,

Sarah Tebbe
Ohio Department of Natural Resources
Office of Real Estate
2045 Morse Road
Columbus, Ohio 43229
(614) 265-6397

Cori Jansing

From: Ohio, FW3 <ohio@fws.gov>
Sent: Thursday, October 10, 2019 2:12 PM
To: Cori Jansing
Subject: Thank you for contacting the USFWS Re: [EXTERNAL] Duke Energy Cumminsville Phase 5B Rebuild

Thank you for contacting the USFWS. This email is your notice that we have **received your project**,
and you can expect a reply and/or a review of your project within 30 days from the date it was received.
Of course, general questions will be answered ASAP.

Sincerely,
Susan (614) 416-8993, Ext. 10

SPECIES	COMMON NAME	STATE STATUS[1]	FEDERAL STATUS[2]	HABITAT[3]	BREEDING PERIOD[3]	PROBABILITY OF OCCURENCE[4]
Hamilton County						
MAMMAL						
Eptesicus fuscus	Big Brown Bat	SSC	---	Wooded and Semi wooded areas, mainly along streams.	August-October	Low
Lasionycteris noctivagans	Silver-haired Bat	SSC	---	Wooded and Semi wooded areas, mainly along streams.	August-October	Low
Lasiurus borealis	Red Bat	SSC	---	Wooded area and wooded edges and hedgerows.	August-September	None
Lasiurus cinereus	Hoary Bat	SSC	---	Wooded, Semi wooded areas, and wooded edges.	August -October	Low
Microtus ochrogaster	Prairie Vole	SSC	---	Dry, vegetated areas; pastures, fields, meadows and prairies	May-October	None
Microtus pinetorum	Woodland Vole	SSC	---	Wooded areas with thick organic material on forest floor.	April-August	None
Myotis lucifugus	Little Brown Bat	SSC	---	Under rocks, wood piles and sometimes caves.	August-December	None
Myotis sodalis	Indiana Myotis	E	E	Wooded and Semi wooded areas, mainly along streams. Maternity colonies are around hollow trees.	August-October	Low
Myotis septentrionalis	Northern long-eared Bat	SSC	T	Wooded and Semi wooded areas; live trees and in snags.	July-August	Low
Perimyotis subflavus	Tri-colored Bat	SSC	---	Edge habitats near areas of mixed agricultural use.	August-October	None
Peromyscus maniculatus	Deer Mouse	SCC	---	Grasslands, brushlands, and agricultural fields.	Year round; mostly during warmer months	None
Reithrodontomys humulis	Eastern Harvest Mouse	T	---	Open grassy areas such as abandoned fields, marshes or wet meadows.	April and August	None
Synaptomys cooperi	Southern Bog Lemming	SSC	---	Low, moist areas, grasslands, mixed deciduous forests, freshwater wetlands, marshes and meadows.	Year-round	None
Taxidea taxus	Badger	SSC	---	Open grasslands, agricultural areas and other treeless spaces.	July-August	None
BIRD						
Dendroica cerulean	Cerulean Warbler	SSC	---	Deciduous hardwood forests, uplands, wet bottomlands, moist slopes.	May-June	None
Regulus satrapa	Golden-crowned Kinglet	SI	---	Deciduous and mixed forests, wooded bogs, parks, bottomland hardwoods, swamps and riversides.	June-July(Migratory)	None
FISH						
Ammocrypta pellucida	Eastern Sand Darter	SSC	---	Rocky pools and runs of creeks and small to medium rivers, often near vegetation or other cover.	Late April-May	Low
Cycleptus elongatus	Blue Sucker	T	---	Large river systems, in a heavy current.	April-June	None
Esox masquinongy	Muskellung	SSC	---	Lakes and large rivers; Prefer shallow water with a rocky bottom and heavy cover.	April	None

Ictalurus furcatus	Blue Catfish	SSC	---	Large river systems.	May-August	None
Lepisosteus platostomus	Shortnose Gar	E	---	Calm waters of large rivers and their backwaters.	February-June	None
Macrhybopsis hyostoma	Shoal Chub	E	---	Small streams with various substrates.	April-June	Low
Moxostoma carinatum	River Redhorse	SSC	---	Medium to large rocky rivers with moderate to strong currents. Usually found in long, deep run habitats.	Early June	Low
Notropis boops	Bigeye Shiner	T	---	Small to medium sized streams with pools over substrates of gravel, rock, or sand.	April-August	Low
Noturus eleutherus	Mountain Madtom	T	---	Fast flowing clear riffles that are shallow.	June-July	None
Noturus stigmosus	Northern Madtom	E	---	Large rivers in swift currents.	June-July	None
Percina copelandi	Channel Darter	T	---	Gravelly shallows of lakes, and in small and medium-sized rivers in riffles over sand, gravel or rock bottoms.	April-May	Low
Percina shumardi	River Darter	T	---	Major rivers and mouths of tributaries with swift currents over sandy, gravelly or rocky substrates.	Year-round, depending on water temperatures.	None
Polyodon spathula	Paddlefish	T	---	Large, slow moving rivers with access to sand or gravel bars.	March-June	None
INVERTEBRATE						
Actinonaias ligamentina ligamentina	Mucket	X	---	Medium to large rivers, usually in areas with fairly good flow. The substrates it prefers include sand and/or gravel.	June-July	Low
Alasmidonta marginata	Elktoe	SSC	---	Shallow to medium sized creeks or rivers.	June-July	Low
Catocala maestosa	---	SI	---	Riparian wooded areas.	July-October	None
Cumberlandia monodonta	Spectacelecase	X	E	Large rivers where they live in areas sheltered from the main force of the river current. This species often clusters in firm mud and in sheltered areas, such as beneath rock slabs, between boulders and even under tree roots.	May-August	None
Cyclonaias tuberculate	Purple Wartyback	SSC	---	Large to medium sized rivers with a gravel or mixed sand substrates.	May-August	Low
Cyprogenia stegaria	Fanshell	E	E	Rivers and streams with abundant gravel and sand substrates.	April-August	Low
Ellipsaria lineolata	Butterfly Mussel	E	---	Large rivers with swift currents in sand or gravel substrates.	July-August	None
Elliptio crassidens crassidens	Elephant-ear	E	---	Rivers and streams with muddy sand, sand, and rocky substrates in moderate currents.	April-May	Low
Epioblasma obliquata obliquata	Purple Cat's Paw	E	E	Large rivers with gravel or mixed sand substrates.	April-May	None
Epioblasma torulosa rangiana	Northern Riffleshell	E	E	Large to small streams.	Breeding season occurs once a year, dependent upon water temperature	Low
Epioblasma triquetra	Snuffbox	E	E	Riffles areas of fast moving rivers and streams.	July-August	Low

Fusconaia ebena	Ebonyshell	E	---	Rivers and streams with coarse sand and gravel substrates.	June-September	Low
Fusconaia maculata maculata	Long-solid	E	---	Small to large rivers in gravel with strong currents.	May-July	Low
Gomphus externus	Plains Clubtail	E	---	Found near large, slow, muddy streams and rivers.	May-Late July	Low
Hemistena lata	Cracking Pearl Mussel	X	E	Prefers gravel riffles of medium-sized streams, and mud and sand bottoms in slower-moving water.	June-July	Low
Lampsilis abrupta	Pink Mucket	E	E	Small to medium rivers with swift currents.	June-July	None
Lampsilis fasciola	Wavy-rayed Lampmussel	SSC	---	Medium streams with gravel or sand bottoms.	June-July	Low
Lampsilis ovata	Sharp-ridged Pocketbook	E	---	Ponds, lakes and streams with slow moving water and plenty of cover.	June-July	None
Lampsilis teres	Yellow Sandshell	E	---	Large rivers with slow moving currents.	June-July	None
Lasmigona compressa	Creek Heelsplitter	SSC	---	Medium to large rivers in pools over compact sand and gravel, or mud patches near shore.	June-July	Low
Leptodea leptodon	Scaleshell	X	E	Medium-sized and large rivers with stable channels and good water quality.	June-July	None
Ligumia recta	Black Sandshell	T	---	Rivers, lakes and large streams in riffles over muddy to gravel substrates.	July-August	Low
Lycaena helloides	Purplish Copper	E	---	Wet meadows, marshes and streamsides.	July-August	None
Megalonaias nervosa	Washboard	E	---	Slow moving rivers and streams with muddy to rocky substrates.	August-October	Low
Nannothermis bella	Elfin Skimmer	E	---	Bogs and fens.	March-September	None
Obliquaria reflexa	Threehorn Wartyback	T	---	Large rivers with sand or gravel substrates.	July-August	None
Obovaria olivaria	Hickorynut	X	E	Shallow water over silt-free sand and gravel bottoms of large rivers.	June-July	None
Obovaria retusa	Ring Pink	X	E	Shallow water over silt-free sand and gravel bottoms of large rivers.	June-July	None
Orconectes sloanii	Sloan's Crayfish	T	---	Freshwater lakes and streams, under rocks and logs.	August-October	Low
Plethobasus cicatricosus	White Wartyback	X	E	Clean, fast-flowing water in silt-free rubble, gravel and sand bottoms of large and rivers.	June-July	None
Plethobasus cooperianus	Orange-footed Pearly Mussel	X	E	Clean, fast-flowing water in silt-free rubble, gravel or sand of medium to large rivers.	June-July	None
Plethobasus cyphyus	Sheepnose	E	E	Large rivers in shallow areas with moderate to swift currents that flow over coarse sand and gravel substrates.	July-August	None
Pleurobema clava	Clubshell	E	E	Medium to large rivers with gravel or sandy substrates.	July-August	Low
Pleurobema cordatum	Ohio Pigtoe	E	---	Large rivers in riffle areas with clear, swift moving water.	April-May	None
Pleurobema plenum	Rough Pigtoe	X	E	Wide variety of streams from large to small. It buries itself in bottoms of firmly packed sand or gravel.	June-July	Low
Pleurobema rubrum	Pyramid Pigtoe	E	---	Medium to large rivers in sand or gravel.	May-July	Low

Pleurobema sintoxia	Round Pigtoe	SSC	---	Small to large rivers with moderate to swift flowing water with gravel, cobble or boulder substrates.	June-July	Low
Ptychobranchus fasciolaris	Kidneyshell	SSC	---	Small to medium sized rivers in riffle areas with clear, swift moving water.	April-August	None
Quadrula cylindrical cylindrical	Rabbitsfoot	E	T	Large, clean, fast-flowing waters.	April-August	None
Quadrula fragosa	Winged Mapleleaf	X	E	Found in riffles with clean gravel, sand, or rubble bottoms and in clear, high quality water.	June-July	None
Quadrula metanevra	Monkeyface	E	---	Large, clean, fast-flowing waters in silt-free rubble, gravel and sand bottoms.	March-July	None
Quadrula nodulata	Wartyback	E	---	Large, clean, fast-flowing waters in silt-free rubble, gravel and sand bottoms.	May	None
Speyeria idalia	Regal Fritillary	E	---	Tall-grass prairie and other open location including meadows, marshes and pastures.	June-July	None
Truncilla donaciformis	Fawnsfoot	T	---	Rivers and lakes in slower moving water. Usually in sand or gravel substrates.	April-May	Low
Truncilla truncata	Deertoe	SSC	---	Lakes and medium to large rivers. Usually in mud, sand or gravel substrates.	August-July	None
Uniomerus tetralasmus	Pondhorn	T	---	Freshwater rivers, ponds and lakes.	Unknown	Low
Villosa fabalis	Rayed Bean	E	E	Small headwater creeks, sometimes found in large rivers. Prefers gravel or sand substrates.	Unknown; Egg-bearing females have been found in May.	None
REPTILE						
Clonophis kirtlandii	Kirtland's Snake	T	---	Prairie fens, wet meadows, wet prairies and associated open and wooded wetlands	February-March, May, August-September	None
Opheodrys aestivus aestivus	Northern Rough Greensnake	SSC	---	Moist meadows and woodlands, often near water.	April-May	None
Terrapene Carolina	Eastern Box Turtle	SC	---	Forests, especially bottomland forests and edge habitats.	May-October	None
AMPHIBIAN						
Acris crepitans crepitans	Eastern Cricket Frog	SSC	---	The shores of sparsely vegetated permanent ponds and streams.	April-June	Low
Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender	E	---	Medium to large, rocky streams that are not excessively silty and have an abundance of crayfish.	September	None
Eurycea lucifuga	Cave Salamander	E	---	In and around caves, seeps, springs, and small forested limestone creeks associated with groundwater. Rock crevices or under rocks, logs, or other debris.	December-February	None
PLANT						
Corallorhiza wisteriana	Spring Coral-Root	P	---	Broad array of coniferous to deciduous habitats in humus rich soils.	n/a	None

Cyperus acuminatus	Pale Umbrella-Sedge	P	---	Open, wet, sandy habitats. Sores, seepages, and fields.	n/a	None
Descurainia pinnata	Tansy Mustard	T	---	Anthropogenic (man-made or disturbed habitats), cliffs, or ledges, ridges or ledges, talus and rocky slopes.	n/a	Low
Echinodorus berteroi	Burhead	P	---	Muddy shores and shallow water of lakes, ponds, slow-moving streams, and ditches. Also in swamp woods and river bottoms.	n/a	None
Lipocarpha micrantha	Dwarf Bulrush	T	---	Sandy-peaty shore of soft water lakes associated with intermittent wetlands and coastal plain marshes.	n/a	None
Paspalum repens	Riverbank Paspalum	T	---	Frequently found submersed or floating, growing in the mud or shallow waters of rivers, ponds, streams and swamps.	n/a	None
Phacelia bipinnatifida	Fern-leaved Scorpion-weed	P	---	Moist areas of deciduous woodlands and rocky woodlands, rocky banks and low areas along woodland streams, moist depressions of bluffs, bottoms of sandstone canyons, and lower slopes of ravines.	n/a	None
Ribes missouriense	Missouri Gooseberry	T	---	Mesic to dry open woodlands, savannas, woodland borders, thickets, power line clearances and small meadows and wooded areas, abandoned fields, and partially shaded fence rows.	n/a	None
Sida hermaphrodita	Virginia-mallow	P	---	Anthropogenic (man-made or disturbed habitats), meadows and fields.	n/a	Low
Spermacoce glabra	Smooth Buttonweed	P	---	Wet meadows, banks of streams, and ditches.	n/a	None
Trifolium reflexum	Buffalo Clover	E	---	Rocky open woods, glades, old fields, prairies. Typically on acid soils.	n/a	None
Trifolium stoloniferum	Running Buffalo Clover	E	E	Disturbed bottomland meadows. Disturbed sites that have shade part of the day.	n/a	None
Trillium recurvatum	Prairie Wake-robin	P	---	Rich woodlands, open woodlands, and savannas, where deciduous trees are dominant. Sometimes this species survives degradation of woodland habitats, and it can be found along fence rows with woody vegetation, overgrown areas near railroads, and miscellaneous waste areas with partial or light shade.	n/a	None
Triphora trianthophora	Three-birds Orchid	P	---	Upland, hardwood forests, often with a well-developed humus layer.	n/a	None
Viburnum rufidulum	Southern Black-haw	P	---	Dry, rocky, wooded slopes and forest edges.	n/a	None

1. STATE STATUS - X = extirpated, E = endangered, T = threatened, P= potentially threatened R = rare, SSC = special concern, WL = watch list, SG = significant, SI = Special Interest ** = no status but rarity warrants concern
Ohio Department of Natural Resources, Division of Wildlife Website - http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/publications/information/pub356.pdf (March 2016).

2. FEDERAL STATUS - E = endangered, T = threatened, R = rare, LELT = different listing for specific ranges or species, PE = proposed endangered , PT = proposed threatened, e/sa – appearance similar to a listed endanger species, **= not listed
United States Fish and Wildlife Service, County Distribution of Federally-Listed Threatened, Endangered, Proposed, and Candidate Species - http://www.fws.gov/midwest/endangered/lists/ohio-cty.html (January 2017).

3. Habitats and Breeding Periods described by:
   a. NatureServe: An online encyclopedia of life [web application].2000. Version 1.1 Arlington, Virginia, USA: Association for Biodiversity information. Available: http://www.natureserve.org/ (Accessed January 6, 2017).
   b. United States Fish and Wildlife Service Rayed Bean Fact Sheet - http://www.fws.gov/midwest/endangered/clams/rayedbean/RayedBeanFactSheet.html (January 6, 2017).
   c. United States Fish and Wildlife Service Indiana Bat Fact Sheet - http://www.fws.gov/midwest/endangered/mammals/inba/index.html (January 6, 2017).
   d. United States Fish and Wildlife Service Northern Long-eared Bat Fact Sheet - http://www.fws.gov/midwest/endangered/mammals/nleb/index.html (January 6, 2017).
   e. United States Fish and Wildlife Service Eastern Massasauga Fact Sheet - http://www.fws.gov/midwest/endangered/mammals/inba/index.html (January 6, 2017).
   f. United States Fish and Wildlife Service Running buffalo clover Fact Sheet - http://www.fws.gov/midwest/endangered/mammals/nleb/index.html (January 6, 2017).

4. Likelihood of occurrence: None, Low, Moderate, or High based on best available data and selective field observations.