APPENDIX F ENVIRONMENTAL SUPPORT INFORMATION

F.1 PROPOSED PROJECT ROUTE WETLAND AND WATERBODY DELINEATION REPORT
F.2 CULTURAL INFORMATION
F.3 FAA PRE-SCREENING RESULTS

F.1 PROPOSED PROJECT ROUTE WETLAND AND WATERBODY DELINEATION REPORT

BURNS McDONNELL

NCHP PHASE 6 PIPELINE SYSTEM REPLACEMENT PROJECT

Ecological Field Survey Report

Project Number: 182585

Date: February 3, 2026

Contents

Tables

1.0 Introduction

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) was retained by NiSource to provide a wetland delineation and habitat assessment for the North Columbus High Pressure (NCHP) Phase 6 Pipeline System Replacement Project (Project) that runs along Bethel Road, Morse Road and Karl Road in the City of Columbus, Sharon Township, Perry Township and Franklin County, Ohio (Appendix A, Figure 1). The purpose of the field work was to document conditions and confirm the presence or absence of the environmental features (wetlands, waterbodies, potential habitat for Threatened and Endangered species). The following sections provide information on the proposed Project and summarizes the completed ecological field survey.

The Project consists of the installation of approximately 5.22 miles of 20-inch pipeline to replace the existing 18-inch and 20-inch pipeline of approximately the same length. Additionally, the Project will involve a new station and several associated lateral connections. Work will begin north of the intersection of Postlewaite Road and Bethel Road. The Project continues east through Bethel Road and Morse Road until it reaches the intersection of Karl Road and Morse Road. The project will then resume northward until it reaches Karl Road Station which is adjacent to the Columbus Metropolitan Library. Workspaces will include installation portions of the Project, equipment access, and other laydown/staging areas, as needed. The ecological survey included all Project related activity and potential workspaces encompassing approximately 106.6 acres (Survey Area).

2.0 Methods

The following discussions summarize the methods used for the review of existing data, wetland delineation, and habitat assessment.

2.1 Existing Data Review

Burns & McDonnell reviewed available background information for the Project prior to conducting a site visit. This available background information included the 2023 U.S. Geological Survey (USGS) 7.5 minute topographic maps (Northwest & Northeast Columbus, Ohio quadrangles), U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps, National Agriculture Imagery Program (NAIP) aerial photography (2022), USGS National Hydrography Dataset (NHD), Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NHFL), and U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) 2019 Soil Survey Geographic (SSURGO) digital data for Franklin County, Ohio. Figures 2 and 3 in Appendix A depict this data.

The presence of environmental resources based only on aerial, NWI, and NHD maps or other background information cannot be assumed to be an accurate assessment of the location and extent of jurisdictional resources and species habitat. Identification criteria differ between the USFWS, USGS, and the U.S. Army Corps of Engineers (USACE). As a result, wetlands, streams or other water resources shown on a NWI or NHD map may not be under the jurisdiction of the USACE, and all USACE-jurisdictional resources are not always included on NWI and NHD maps. Furthermore, potential species habitat cannot be identified without conducting a field visit. Therefore, a field visit was conducted to identify any environmental resources that may be present.

2.2 Wetland Delineation

A Burns & McDonnell wetland scientist completed a wetland delineation of the Survey Area on July 31, 2025. The Survey Area included the areas where proposed Project activities would occur. The delineation was completed in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual (1987 Manual) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region – Version 2.0 (Regional Supplement). If wetlands are identified within the Project, sample plots are established at multiple locations and Wetland Determination Data Forms from the Regional Supplement are completed to characterize the wetlands within the Survey Area. Vegetation, soil conditions, and hydrologic indicators are recorded at the sample plots. Locations of identified features were surveyed using a sub-meter-accurate global positioning system (GPS) unit. Photographs were taken onsite and are included in Appendix B (Photographs 1 through 29).

2.3 Wetland Evaluation

Each delineated wetland within the Survey Area is assessed and assigned a category using the Ohio Rapid Assessment Method (ORAM) for Wetland Categorization. According to Ohio Administrative Code, Category 1 wetlands have minimal habitat and minimal hydrological and recreational functions. These wetlands do not provide critical habitat for threatened or endangered species. Category 2 wetlands have moderate wildlife habitat or hydrological or recreational functions. Category 2 wetlands are dominated by native vegetation but generally do not contain threatened or endangered species habitat. Category 3 wetlands have superior

habitat or hydrological or recreational functions. These wetlands often provide habitat for threatened or endangered species.

The State of Ohio affords different levels of protection to wetlands based on wetland quality. If wetlands are identified within the Project, the Quantitative Rating pages from the ORAM 10-page form for Wetland Categorization are completed and a preliminary ORAM score for each wetland within the Survey Area is determined.

2.4 Stream Evaluation

The Survey Area was inspected for streams and other Water of the United States (WOTUS). Streams are identified by the presence of a defined bed and bank and an ordinary high-water mark (OHWM). An assessment of habitat in flowing waters was performed for streams located within the Survey Area using the Ohio Environmental Protection Agency (Ohio EPA) Qualitative Habitat Evaluation Index (QHEI) or Headwater Habitat Evaluation Index (HHEI). The QHEI & HHEI Field Sheets are included in Appendix C.

2.5 Protected Species

In July and August 2025, the USFWS Information for Planning and Consultation (IPaC) report and the Ohio Department of Natural Resources (ODNR) County lists were researched for federal, and state protected species present within and near the Survey Area. Project initial review request letters were also sent to the USFWS and ODNR in August 2025. Responses were received from the USFWS and ODNR in August and September 2025. A new request for an updated review has been sent to both agencies in February 2026 due to the new location for the proposed station. Responses from both agencies have yet to be received. Please refer to Appendix F for the official IPaC, county lists, and agency letters/responses. In addition to agency consultation, the Ohio Mussel Survey Protocol of April 2025 was reviewed. Olentangy River is listed as a Group 1 stream by the ODNR, indicating that federally listed mussel species are not expected within the Survey Area. However, ODNR response indicated that a reconnaissance survey should occur for Group 1 streams with a watershed greater than 5 square miles. Results of the reconnaissance survey are discussed in the results section below.

A desktop and onsite habitat assessment was performed to identify potential habitat of federally and state-listed species within the Survey Area. A general bat habitat survey to identify potential roost habitat trees (i.e. trees larger than 3 inches in diameter breast height (dbh) that also displayed characteristics such as loose bark, hollows, sloughing, and crevasses) within forested habitat of the Survey Area was conducted. The Survey Area was also assessed for the presence of potential habitat that could support other listed species.

3.0 Results

The following sections describe the results of the existing data review, completed wetland delineation, and habitat assessment.

3.1 Existing Data Review

The existing USGS topographic maps were reviewed to familiarize Burns & McDonnell wetland personnel with the topography and potential locations of wetlands and other waterbodies (Appendix A, Figure 2). The USGS topographic maps indicate the Survey Area is mostly flat with some steeper slopes around the NHD streamlines. USFWS NWI data shows four NWI riverine features within the Survey Area. USGS NHD data depicts three streams, including the Olentangy river, crossing the Survey Area. Bill Moose Run is depicted as crossing the Survey Area, however, it was identified adjacent to the west but not within Survey Area boundaries during the field visit (Appendix A, Figure 2). The Olentangy River was identified as S04 during the environmental field survey and has mapped FEMA regulated floodplain and floodway within the Survey Area (Appendix A, Figure 3). Aerial imagery indicates the Survey Area consists of road right of way, commercial, and residential areas with some maintained grass and a few landscape trees (Appendix A, Figures 3 and 4).

The NRCS SSURGO digital data indicates that portions of 12 soil map units are located in the Survey Area (Appendix A, Figure 3). Nine of these of these soil map units are a low ten percent hydric. Soil map units identified within the Survey Area are listed below:

- AdD2: Alexandria silt loam, 12 to 18 percent slopes, eroded, non-hydric
- AdE2: Alexandria silt loam, 18 to 25 percent slopes, eroded, non-hydric
- BfA: Bennington-Urban land complex, 0 to 2 percent slopes, 6% hydric
- BfB: Bennington-Urban land complex, 0 to 6 percent slopes, 6% hydric
- CbB: Cardington-Urban land complex, 2 to 6 percent slopes, 10% hydric
- CbC: Cardington-Urban land complex, 6 to 12 percent slopes, 5% hydric
- CeB: Celina silt loam, 2 to 6 percent slopes, 5% hydric
- CfB: Celina-Urban land complex, 2 to 6 percent slopes, 5% hydric
- Mh: Medway silt loam, occasionally flooded, 5% hydric
- MnC: Miamian-Urban land complex, 6 to 12 percent slopes, non-hydric
- OcB: Ockley silt loam, Southern Ohio Till Plain, 2 to 6 percent slopes, non-hydric
- Rs: Ross silt loam, 0 to 2 percent slopes, occasionally flooded, 6% hydric
- Ut: Udorthents-Urban land complex, gently rolling, non-hydric
- Uu: Urban land-Bennington complex, 0 to 6 percent slopes, 6% hydric

3.2 Field Survey

On July 31, 2025, a Burns & McDonnell wetland scientist and GIS specialist conducted a wetland delineation and protected species habitat assessment of the Survey Area and recorded the location and extent of features identified within the Survey Area. Upland habitat within the Survey Area consists primarily of maintained roadside within residential urban areas. Typical vegetation within this upland maintained habitat

consists of Kentucky bluegrass (*Poa pratensis*), common wood sedge (*Carex blanda*), tall fescue (*Schedonorus arundinaceus*) and buckhorn plantain (*Plantago lanceolata*).

3.3 Delineated Areas

Three wetlands and five streams were identified within the Survey Area during the delineation effort. The location of identified resources is shown in Appendix A (Figure 4). The USACE's antecedent precipitation tool (APT) was used to determine if rainfall was within a normal range preceding and during the delineation (Appendix G). The APT indicated that the area was experiencing an incipient drought regarding long term conditions but was still categorized as having normal conditions at the time of the investigation. The 30-day rolling rainfall total was within the 30-year normal range for rainfall on the day of the field survey.

3.3.1 Wetlands

Table 1 provides the size and type of each wetland delineated within the Survey Area. The ORAM forms can be found in Appendix D. The wetland determination data forms can be found in Appendix E.

Table 1: Wetlands Delineated Within the Survey Area

Wetland ID	Wetland Type[a]	Area within Survey Area (acres)	ORAM Score	ORAM Category
W01	PEM	0.01	12	1
W02	PEM	0.12	12	1
W03	PEM	0.03	11	1

a - PEM= Palustrine emergent wetland.

Wetland (W)01 is a PEM wetland (Appendix B, Photographs 1-4). A total of 0.01 acres of W01 was delineated within the Survey Area. Dominant vegetation within the wetland included sandbar willow (*Salix interior*) and narrowleaf cattail (*Typha angustifolia*). Observed indicators of wetland hydrology included iron deposits, geomorphic position, and a positive FAC-neutral test. W01 was assessed to be an ORAM category 1 wetland. It is our professional opinion that W01 is an isolated feature and would not be considered jurisdictional or a WOTUS.

W02 is a PEM wetland (Appendix B, Photographs 6-9). A total of 0.12 acres of W02 was delineated within the Survey Area. Dominant vegetation within the wetland included broadleaf cattail (*Typha latifolia*) and common rush (*Juncus effusus*). Observed indicators of wetland hydrology included surface water, high water table, saturation, geomorphic position, and a positive FAC-neutral test. W02 was assessed to be an ORAM category 1 wetland. It is our professional opinion that W02 is an isolated feature and would not be considered jurisdictional or a WOTUS.

W03 is a PEM wetland (Appendix B, Photographs 11-14). A total of 0.03 acres of W03 was delineated within the Survey Area. Dominant vegetation within the wetland included broadleaf cattail (*Typha latifolia*) and sedge (*Carex spp*). Observed indicators of wetland hydrology included surface water, high water table, saturation, geomorphic position, and a positive FAC-neutral test. W03 was assessed to be an ORAM category 1 wetland. It is our professional opinion that W03 is an isolated feature and would not be considered jurisdictional or a WOTUS.

3.3.2 Streams

Table 2 provides the size and type of each stream delineated within the Survey Area.

Table 2: Streams Delineated Within the Survey Area

Stream ID/Name	Stream Type[a]	Length Within Survey Area (Feet)	Width (Feet)	QHEI Score	HHEI Score
S01	Ephemeral-NPW	535.9	3.5	n/a	16
S02	Ephemeral-NPW	412.0	2.5	n/a	28
S03	Intermittent-RPW	134.8	15	n/a	64
S04 / Olentangy River	Perennial-RPW	153.0	139.5	66.5	n/a
S05	Intermittent-RPW	98.6	15	n/a	46

a - RPW = Relatively Permanent Water = tributaries that have flowing or standing water year-round or continuously during certain times of year. NPW = Non-relatively Permanent Waters = tributaries that have flowing or standing water only in response to precipitation or that do not have continuously flowing or standing water at least seasonally.

Stream (S)01 is an unnamed ephemeral stream (Appendix B, Photographs 16 and 17). A total of 535.9 feet of S01 was delineated within the Survey Area. S01 was approximately 3.5 feet wide, had a bank height of 2.0 feet, and a depth to OHWM of 0.4 feet. It achieved a HHEI score of 16. S01 flows offsite to the east. It is our professional opinion that S01 is not a RPW and should not be considered jurisdictional, a WOTUS or WOS.

S02 is an unnamed ephemeral stream (Appendix B, Photographs 18 and 19). A total of 412.0 feet of S02 was delineated within the Survey Area. S02 was approximately 2.5 feet wide, had a bank height of 2.0 feet, and a depth to OHWM of 1.0 feet. It achieved a HHEI score of 28. S02 flows through a culvert under State Route 315 and into intermittent S03, and eventually into the Olentangy River. S02 is not considered an RPW, therefore, it is our professional opinion that that this stream is not jurisdictional, a WOTUS or a WOS.

S03 is an unnamed, relatively permanent intermittent stream (Appendix B, Photographs 20 and 21). A total of 134.8 feet of S03 was delineated within the Survey Area. S03 was approximately 15 feet wide, had a bank height of 5.0 feet, and a depth to OHWM of 0.9 feet. It achieved a HHEI score of 64. S03 flows into the Olentangy River. In our professional opinion S04 is a RPW and should be considered jurisdictional and a WOTUS.

S04 or Olentangy River is a relatively permanent perennial stream (Appendix B, Photographs 22 and 23). A total of 153.0 feet of S04 was delineated within the Survey Area. S04 was approximately 139.5 feet wide, had a bank height of 5.0 feet, and a depth to OHWM of 2.8 feet. It achieved a QHEI score of 66.5. S04 flows offsite towards the southeast. It is our professional opinion that S04 is a RPW and should be considered jurisdictional and a WOTUS.

S05 is an unnamed intermittent stream (Appendix B, Photographs 24 and 25). A total of 98.6 feet of S05 was delineated within the Survey Area. S05 was approximately 15 feet wide, had a bank height of 4.0 feet, and a depth to OHWM of 0.1 feet. It achieved a HHEI score of 46. S05 flows into the Olentangy River. It is our professional opinion that S05 is a RPW and should be considered jurisdictional and a WOTUS.

3.3.3 Additional Features

Approximately 0.05 acres of one pond (Appendix B, Photograph 26) was delineated within the Survey Area adjacent to Karl Road. The feature is manmade, developed to gather stormwater from a nearby culvert within the private property. Because of this, no sample plots or assessments were collected for this feature. It is our professional opinion that this feature should not be considered jurisdictional or a WOTUS.

3.4 Protected Species

The USFWS IPaC report and the ODNR County lists (Appendix F) were researched for federal, and state protected species present within and near the Survey Area. Project initial review request letters were also sent to the USFWS and ODNR in August 2025. A response was received from the USFWS and ODNR in August and September 2025. Consultation with both agencies was renewed in February 2026 concerning the relocation of the station onto the Ohio School for the Deaf property. Responses to the update were received from the USFWS in February 2026 and from the ODNR in March 2026. State-listed plant species with records 25 years old or greater are not included as part of this discussion as such old species records are assumed to no longer exist. Listed species, and the designation of their listing, are identified in Table 3, below. If available, habitat types for the respective species are also listed in Table 3. No Critical Habitat for the species below was identified during the IPaC search.

No potential roost trees were identified within the forested portions of the Survey Area during the onsite habitat assessment. No trees had characteristics suitable for roosting such as cracks, crevices, and/or exfoliating bark. Although a species-specific survey was not conducted, no bats were observed while on-site. Many landscape trees are present within the road right of way. The USFWS lists the Indiana Bat (*Myotis sodalis*) and Northern Long-eared Bat (*Myotis septentrionalis*) as federally endangered species that occur throughout the State of Ohio. Additionally, the Tricolored Bat (*Perimyotis subflavus*) is listed as proposed endangered. The USFWS recommends seasonal tree clearing during the approved timeframe of October 1st through March 31st to avoid adverse effects to the listed bat species. If seasonal tree clearing is not possible, a summer presence/absence survey and further agency coordination may be required. Also, the USFWS states that due to the Project size, location and type they do not anticipate adverse impacts to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat.

The ODNR review of the Natural Heritage Database revealed data pertaining to valuable conservation features associated with six species. This includes one species of state special interest and five state species of concern recorded within one mile of the Project area. The ODNR Division of Wildlife (DOW) lists the project within the vicinity of records for the Little Brown Bat (*Myotis lucifugus*), a state endangered species. Summer tree cutting is not recommended. While additional summer surveys in the area would not constitute species presence/absence, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW. Furthermore, the entire state of Ohio is within the range of the Indiana Bat, a state endangered and federally endangered species, the Northern Long-eared Bat, a state endangered and federally endangered species, the Little Brown Bat, a state endangered species, and the Tricolored Bat, a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in clusters of dead leaves on tree limbs. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree and/or tree limb clearing only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with a Diameter Breast Height (DBH) ≥ 20” if possible.

The DOW notes the project is within range of several state and federal threatened and endangered mussel species. If in-water work is planned in any stream that meets the criteria established in the Ohio Mussel Survey Protocol (2025), the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat

upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. According to the Ohio Mussel Survey Protocol, the Olentangy River is listed as a Group 1 stream and has a watershed greater than 5-mi^2. A reconnaissance survey was conducted along the banks of the Olentangy River. The Ohio Mussel Habitat Assessment Form was completed and is included alongside the QHEI in Appendix C. No evidence of mussels was documented for the section of the Olentangy River within the Survey Area. Furthermore, no in-water work is proposed within the Olentangy River therefore, no impacts to mussel species is expected to occur. Horizontal directional drilling (HDD) is proposed to minimize impacts to the Olentangy River and no further mussel surveys are required. Geotechnical data that outlines sub-surface work will be provided to the appropriate contacts listed in Appendix C of the Ohio Mussel Survey Protocol.

The DOW also notes the project is within range of several state threatened and endangered fish species and thus recommends no in-water work in perennial streams from March 15-June 30 to avoid impact to indigenous aquatic species and their habitat. The DOW lists the project within the range of the Sandhill Crane (*Antigone canadensis*), a state threatened species that depends on primarily wetland habitat. Suitable habitat such as grassland and prairie was not found within the Survey Area. Wetland habitat was identified within the Survey Area, however, this habitat is low quality and located along roadway and not considered to be suitable for the Sandhill Crane. The DOW also lists the project within the range of the Upland Sandpiper (*Bartramia longicauda*), a state endangered bird that nests in grassland habitats, including grazed pastures and hayfields, between April 15 and July 31. Suitable habitat such as grassland, pasture and hayfields was not found within the Survey Area. ODNR's DOW also 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.

Burns & McDonnell performed a desktop review for potential hibernacula within the vicinity of the Project. The ODNR Division of Geological Survey Karst and Mine maps of Ohio did not identify any karst features or mines within the Project. No karst features are located near the Project. The closest mine is an active limestone surface mine located approximately 4.15 miles southwest of the Project.

Table 3: Threatened and Endangered Species with Potential to be Within the Survey Area

Species	Status[a]	Habitat Type	Habitat Observed
Mammals			
Indiana Bat (*Myotis sodalis*)	FE, SE	Winter hibernacula includes caves or abandoned mines. Summer roosting habitat includes wooded areas containing dead or dying trees or living trees that have cracks, crevices, and/or exfoliating bark and a diameter-at-breast-height (dbh) of 5 inches or greater. Tend to forage within forest or along forest edges.	No
Northern Long-eared Bat (*Myotis septentrionalis*)	FE, SE	Winter hibernacula includes caves or abandoned mines. Summer roosting habitat includes wooded areas containing dead or dying trees or living trees that have cracks, crevices, and/or exfoliating bark and a diameter-at-breast-height (dbh) of 5 inches or greater. Tend to forage within forest or along forest edges.	No

Species	Status[a]	Habitat Type	Habitat Observed
Little Brown Bat (*Myotis lucifugus*)	SE	Winter hibernacula includes caves or abandoned mines. Summer roosting habitat includes wooded areas containing dead or dying trees or living trees that have cracks, crevices, and/or exfoliating bark and a diameter-at-breast-height (dbh) of 5 inches or greater. Tend to forage within forest or along forest edges.	No
Tricolored Bat (*Perimyotis subflavus*)	PE, SE	This bat roosts in live and dead leaf clusters. Winter hibernacula includes caves or abandoned mines, culverts, and abandoned water wells. Tend to forage in forests or along forest edges.	No
Bird			
Sandhill Crane (*Antigone canadensis*)	ST	Primarily breeds, migrates, winters, and forages in various wetland habitats. Habitats also include open grasslands such as harvested agriculture fields and marshy meadows.	No
Upland Sandpiper (*Bartramia longicauda*)	SE	Grasslands, including grazed and ungrazed pastures, and agricultural fields such as fallow and hay fields.	No
American Bittern (*Botaurus lentiginosus*)	SE	Freshwater and brackish marshes and swamps.	No
Lark Sparrow (*Chondestes grammacus*)	SE	Open grassy habitats with scattered trees and shrubs including orchards, fallow fields, open woodlands, mesquite grasslands, savanna, sagebrush steppe, and grasslands.	No
Least Bittern (*Ixobrychus exilis*)	ST	Freshwater or brackish marshes with tall grasses, cattails, and reeds. Winter in areas saltwater, brackish and freshwater wetlands.	No
Barn Owl (*Tyto furcata*)	ST	Open areas, forest edges, clearings, farmland, and cities. Hunting habitats are predominantly open landscapes.	No
Fish			
Lake Chubsucker (*Erimyzon sucetta*)	ST	Natural lakes, sluggish streams, along with marshes with dense aquatic vegetation and clear waters.	No
Iowa Darter (*Etheostoma exile*)	SE	Clean, clear, slow-moving waters such as lakes, ponds, and the backwaters of streams and rivers with vegetation.	No
Spotted Darter (*Etheostoma maculatum*)	SE	Found in the basin of the Ohio River and inhabits fast-flowing rocky riffles of medium-sized and smaller rivers, where there are many very large boulders or flat slabs of rock.	No
Shortnose Gar (*Lepisosteus platostomus*)	SE	Lakes, swamps, and the calm pools and backwaters of creeks and rivers.	No
Blacknose Shiner (*Notropis heterolepis*)	SE	Cool weedy creeks, small rivers, and lakes over sand.	No
Paddlefish (*Polyodon spathula*)	ST	Slow-moving, large, deep freshwater rivers and reservoirs.	Yes; no in-water work is anticipated
Reptile			

Species	Status[a]	Habitat Type	Habitat Observed
Smooth Greensnake (*Opheodrys vernalis*)	SE	Lightly forested habitats, such as peat lands, pastures, bogs, marsh edges, and wet meadows.	No
Invertebrate			
Clubshell (*Pleurobema clava*)	SE	Restricted mainly to headwater stretches of streams and small rivers. Prefers clean, loose sand and gravel.	No
Northern Riffleshell (*Epioblasma rangiana*)	SE	Found in a variety of streams with firmly packed sand or gravel.	Yes; no in-water work anticipated
Rayed Bean (*Villosa fabalis*)	SE	Smaller, headwater creeks, but it is sometimes found in large rivers and wave-washed areas of glacial lakes. Prefers gravel or sand substrates.	Yes; no in-water work anticipated
Salamander Mussel (*Simpsonaias ambigua*)	PE, ST	Requires habitat conditions that support mudpuppy (*Necturus maculosus*) populations, including clean, clear, flowing water, flat rocks and bedrock that provide crevice for shelter	No
Slippershell Mussel (*Alasmidonta viridis*)	ST	Headwaters, including intermittent creeks.	No
Elephant-ear (*Elliptio crassidens*)	SE	Strictly limited to big rivers, mainly Ohio River, in stable cobble and sand.	Yes; no in-water work anticipated
Snuffbox (*Epioblasma triquetra*)	SE	Small- to medium-sized creeks, inhabiting areas with a swift current, although it is also found in Lake Erie and some larger rivers. Adults often burrow deep in sand, gravel, or cobble substrates, except when they are spawning.	No
Pocketbook (*Lampsilis ovata*)	SE	Rivers and large creeks in stable sand and coble, although prefers a mix of gravel and sand with some silt or mud. Usually in moderately strong currents but can also exist in still water.	Yes; no in-water work anticipated
Washboard (*Megalonaias nervosa*)	SE	Inhabits small to large rivers, usually with slow currents and muddy to coarse gravel substrates.	Yes; no in-water work anticipated
Round Hickorynut (*Obovaria subrotunda*)	FT, ST	From large rivers to small streams with moderate flow, along with lakes, with sand, gravel, and cobble substrates.	Yes; no in-water work anticipated
Rabbitsfoot (*Theliderma cylindrica*)	SE	Small to medium sized streams and some larger rivers. It occurs in shallow water areas along the bank and in shoals with reduced water velocity.	Yes; no in-water work anticipated
Pondhorn (*Uniomerus tetralasmus*)	ST	Quiet or slow-moving, shallow waters. Tolerant of poor water conditions. Sometimes found buried in fine silt and/or mud substrate.	Yes; no in-water work anticipated
Insects			
Monarch Butterfly (*Danaus plexippus*)	PT	Milkweed and flowering plants in a variety of habitats. Adults roost in trees near water, such as maple and conifers in the northern USA, and pecan and oak trees in the southern USA.	No

Species	Status[a]	Habitat Type	Habitat Observed
Stygian Shadowdragon (*Neurocordulia yamaskanensis*)	SE	Nymphs are found living in stream beds and utilize the nearby rocks and trees for emergence from exoskeletons before taking flight.	No
Plants			
Gattinger's-foxglove (*Agalinis gattingeri*)	ST	Dry roadsides, open woodlands, forest margins, mesic prairies, exposed ridges, and outcrops	Yes; these species were not documented in the project specific ODNR response
Spreading Rock Cress (*Arabis patens*)	SE	Moist rocky woods, limestone outcrops, and shady riverbanks.	Yes; these species were not documented in the project specific ODNR response
Cypress-knee Sedge (*Carex decomposita*)	SE	Very wet depressions in mixed swamp forests, most frequently on hummocks, exposed logs and peaty mounds. Found to be highly associated with buttonbush.	No
Showy Goldenrod (*Solidago speciosa*)	ST	Found in dry and sandy grasslands and fields, along with limestone barrens, oak savannas, open woods, and road embankments.	No

(a) FE = Federally Endangered, FT = Federally Threatened, SE = State Endangered, ST = State Threatened, PE = Proposed Endangered (Federal), PT= Proposed Threatened (Federal).
Source: Ohio DNR State Listed Species by County Report for Franklin County, accessed June 16, 2025; USFWS ECOS Species by County Report for Franklin, Ohio, accessed June 16, 2025.

4.0 Summary

Burns & McDonnell conducted a wetland delineation and onsite habitat assessment within the Survey Area to identify protected species habitat, wetlands, and other waterbodies. Three wetlands, two ephemeral streams, two intermittent streams, and one perennial stream (Olentangy River) were identified within the Survey Area. A portion of a manmade pond was also identified within the Survey Area and extends outside the survey area to the east. Because the ODNR lists the Olentangy River as a Group 1 stream, the Ohio Mussel Survey Protocol of April 2025 was also reviewed. Bill Moose Run crosses under the Survey Area via culvert, but was not delineated within the Survey Area as the sections of open stream channel are located outside the Survey Area to the east and west. No in-water work is anticipated that would require in-water work avoidance during ODNR recommended times of year.

Coordination with the USFWS and the ODNR was initiated in August 2025 and renewed in February 2026 regarding the relocation of the proposed station. Known records of the Little Brown Bat are within the project vicinity and summer tree clearing is not recommended. No potential roost trees were identified during the field visit; however, the USFWS and the ODNR responses recommend tree clearing be conducted between October 1st and March 31st to avoid impacts to bats. If tree clearing activities cannot be conducted during this timeframe additional agency coordination may be necessary. Furthermore, if tree clearing activities are required during the summer it is possible that the agencies could request additional surveys.

Suitable habitat pertaining to several state listed mussels, as well as one fish species and two plant species were identified within the Survey Area. No in-water work is proposed and therefore no impacts will occur to listed aquatic species. The two state-listed plant species were not documented within the Project and therefore are assumed to not be present within the Survey Area. Additionally, no habitat was identified for listed bird species and no work within nesting bird species habitat is proposed and therefore no impacts will occur. If proposed impacts change further coordination may be necessary.

The USACE – Huntington District and the Ohio EPA regulate impacts to WOTUS and waters of the State (WOS), including wetlands and streams. If temporary or permanent fill will be placed in jurisdictional wetlands or streams that exceed 0.1 acre of impact, a Pre-Construction Notification will need to be submitted to the USACE Huntington District to receive coverage under Nationwide Permit 12 (NWP). General conditions of NWP 12 must be followed even if impacts are temporary or less than 0.1 acre. While the Project overlaps a FEMA regulatory floodway and 100-year floodplain associated with the Olentangy River, floodplain permitting is not anticipated as no in-water work is proposed. If impacts to WOS are proposed, then additional state permitting may be required.

On November 15, 2023, the U.S. Environmental Protection Agency and the USACE issued an update to the revised rules relevant for implementing either the 2023 rule or the pre-2015 regulatory regime. Based on this document, the USACE will use the “Relatively Permanent Standard” for determining if a tributary is jurisdictional. Relatively permanent waters (RPW) include tributaries that have flow or standing water year-round or continuously during certain times of year. RPWs do not include tributaries with flow or standing water for only a short duration in direct response to precipitation. “Direct response to precipitation” is intended to distinguish between episodic periods of flow associated with discrete precipitation events versus continuous flow for extended periods of time. With the new guidance, the USACE may no longer use the term “ephemeral streams”. However, ephemeral streams are those tributaries that flow for short durations as a direct response to rain events and as such, based on the current guidance, are not RPWs.

On March 12, 2025, new regulation clarified that wetlands must have a direct, continuous surface connection to a larger body of water to qualify for federal protection. This emphasizes that wetlands are only regulated if they abut or touch another regulated waterbody. The new regulation excludes certain wetlands separated by natural barriers or those that only connect during seasonal flooding from being a WOTUS.

A USACE jurisdictional determination is recommended if wetland and stream impacts will occur to verify jurisdictional status and boundaries. If there are proposed impacts to regulated features, a non-notifying/self-certifying memo will be created to document any Project impacts below permitting thresholds and provide guidance on environmental compliance with the Clean Water Act. This package is for internal documentation purposes only and does not include agency submittal or review.

Appendix A – Figures

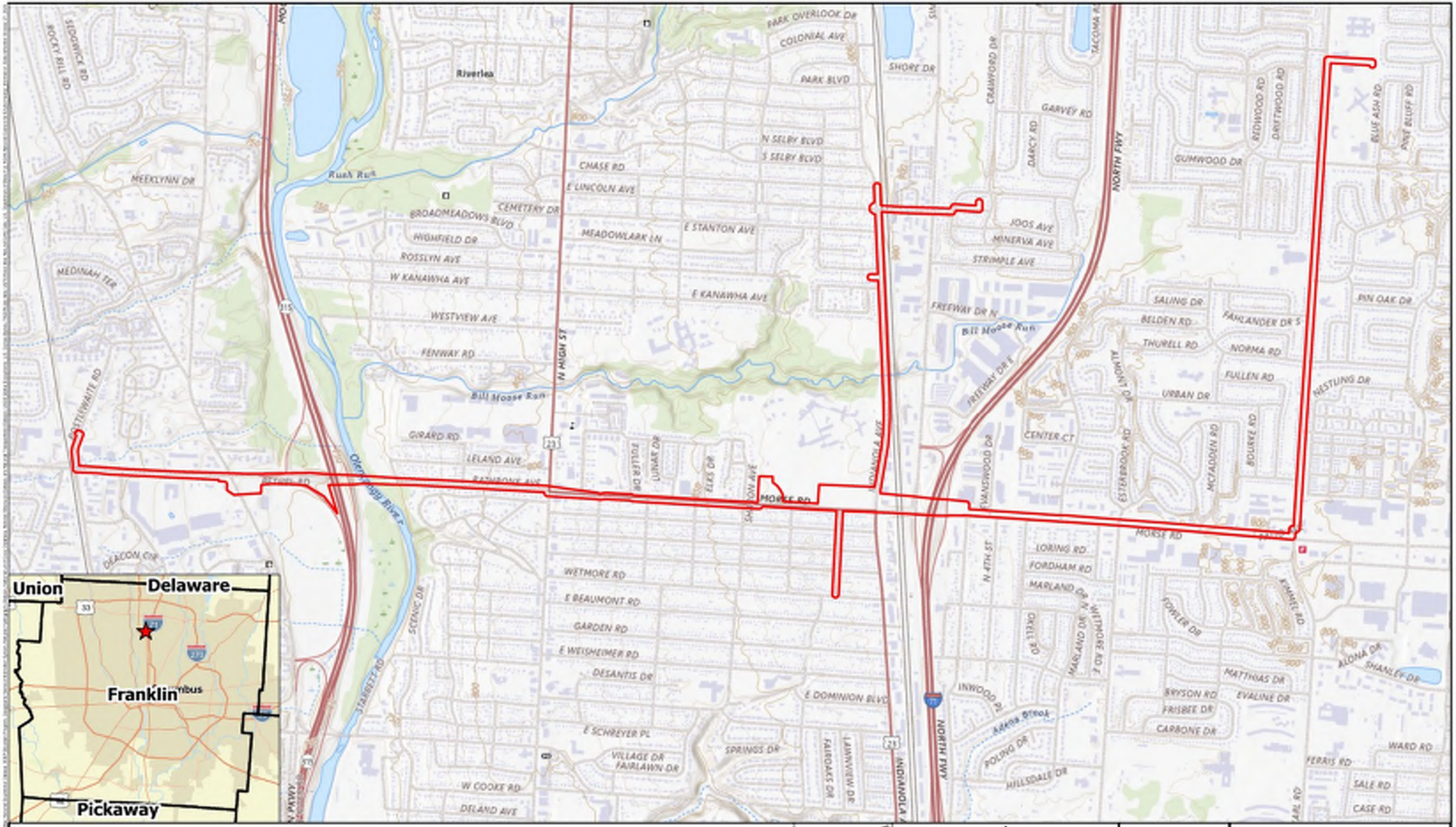
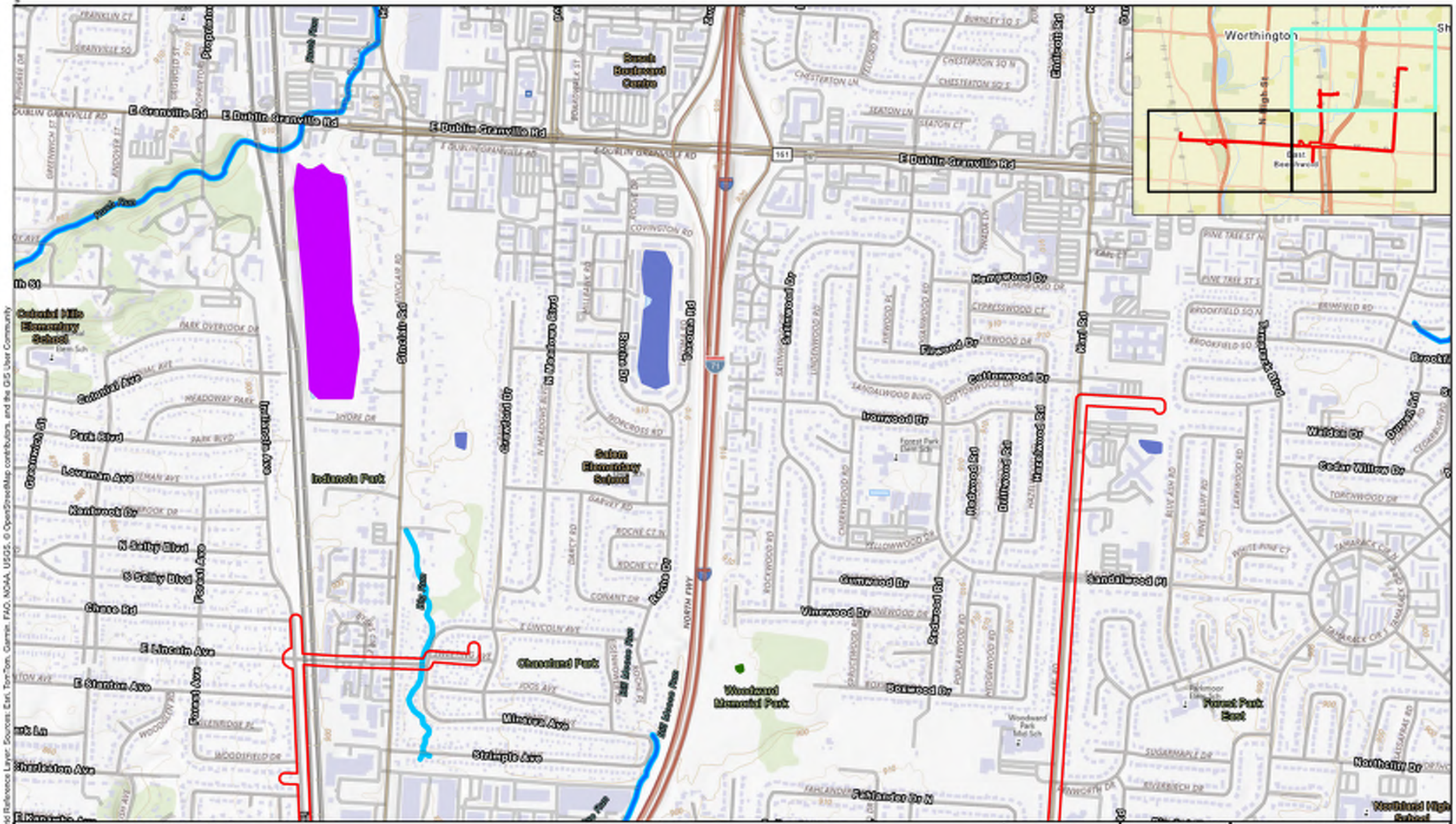


Figure 1: Vicinity Map
NCHP Phase 6 Pipeline
System Replacement Project
NiSource
Franklin County, OH

Source: NiSource, Burns & McDonnell, USGS, and ESRI

Issued: 1/23/2026



BURNS McDONNELL

Figure 2
NWI, NHD, and Topographic Map
NiSource NCHP Phase 6 Pipeline System Replacement Project
Franklin County, OH
Page 1 of 3

Issued: 1/23/2026

Survey Area
NHD Streams

Wetland Type
Palustrine Emergent Wetland (PEM)
Palustrine Forested/ Scrub-Shrub (PFO/PSS)
Palustrine Unconsolidated Bottom (PUB)

Lake
Riverine

NORTH

800 400 0 800
Scale in Feet

BURNS McDONNELL

Figure 2
NWI, NHD, and Topographic Map
NiSource NCHP Phase 6 Pipeline
System Replacement Project
Franklin County, OH
Page 2 of 3

Service Layer Credits: Hybrid Reference Layer: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Source: National Wetland Inventory, National Hydrology Dataset, NiSource, Burns & McDonnell, and ESRI

Issued: 12/3/2020

Survey Area
NHD Streams

Wetland Type
Palustrine Emergent Wetland (PEM)
Palustrine Forested/ Scrub-Shrub (PFO/PSS)
Palustrine Unconsolidated Bottom (PUB)

Lake
Riverine

NORTH

800 400 0 800
Scale in Feet

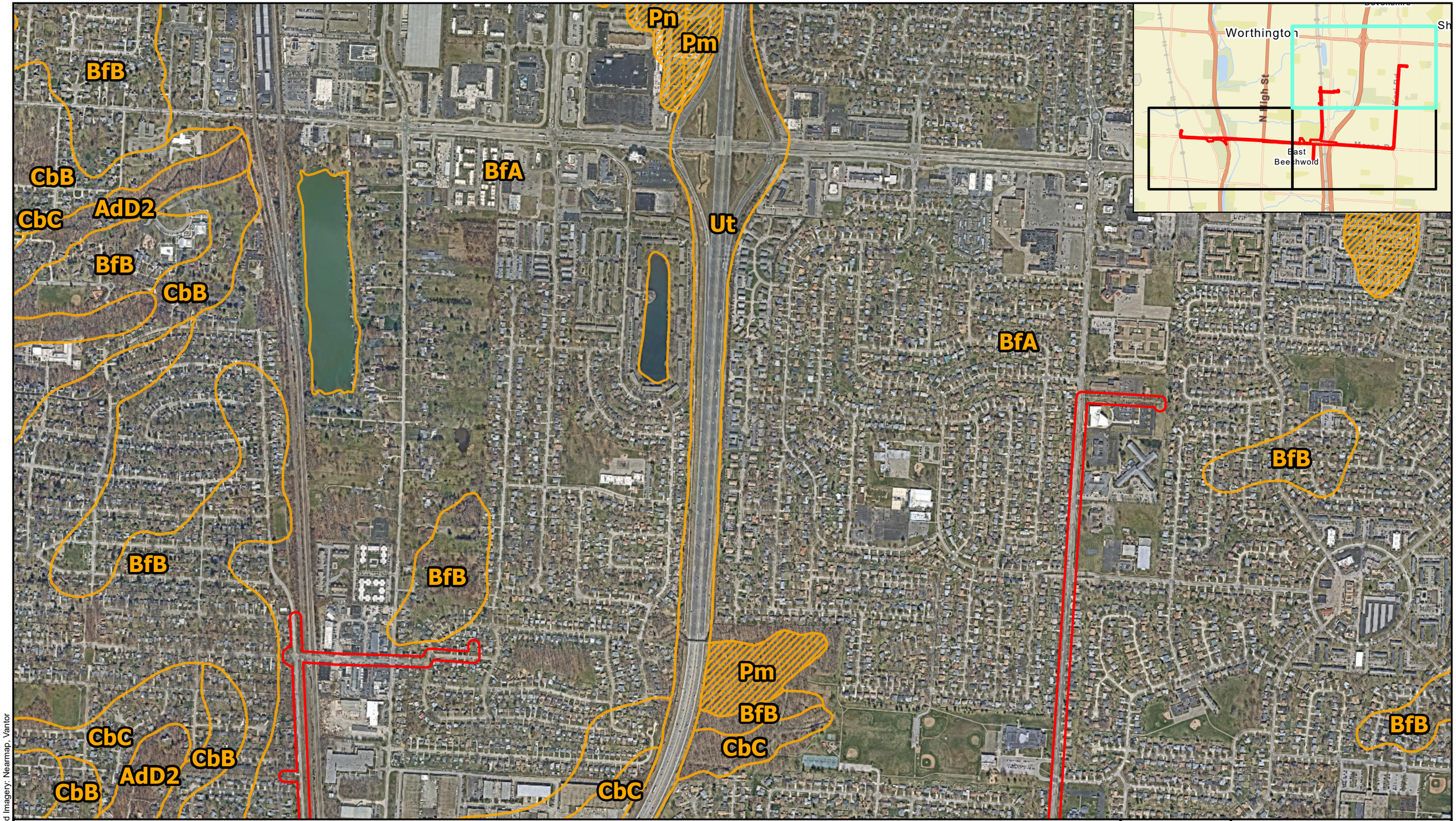
BURNS McDONNELL

Figure 2
NWI, NHD, and Topographic Map
NiSource NCHP Phase 6 Pipeline
System Replacement Project
Franklin County, OH
Page 3 of 3

Issued: 1/23/2020

Source: National Wetland Inventory, National Hydrology Dataset, NiSource, Burns & McDonnell, and ESRI

Service Layer Credits: Hybrid Reference Layer: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community



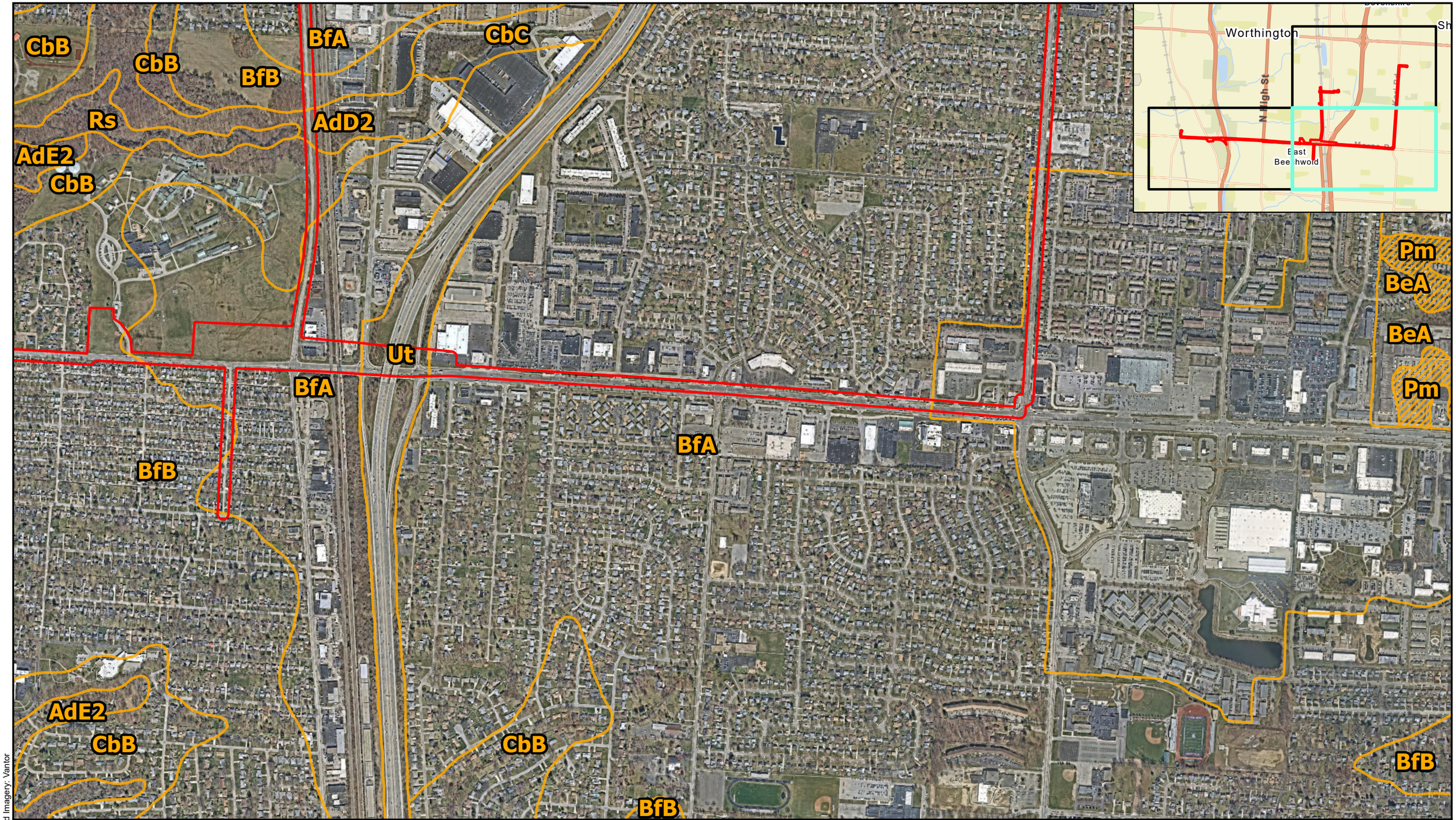
Service Layer Credits: World Imagery: Nearmap, Vantor

Source: FEMA, SSURGO, NiSource, Burns & McDonnell, and ESRI.

BURNS McDONNELL

Figure 3
Soils and Floodplain Map
NiSource NCHP Phase 6 Pipeline
System Replacement Project
Franklin County, OH

Issued: 1/23/2026



Survey Area
Soil Map Units
Majority Hydric Soils

FEMA Floodplain
500-Year Floodplain
100-Year Floodplain
Regulatory Floodway

NORTH

800 400 0 800

Scale in Feet

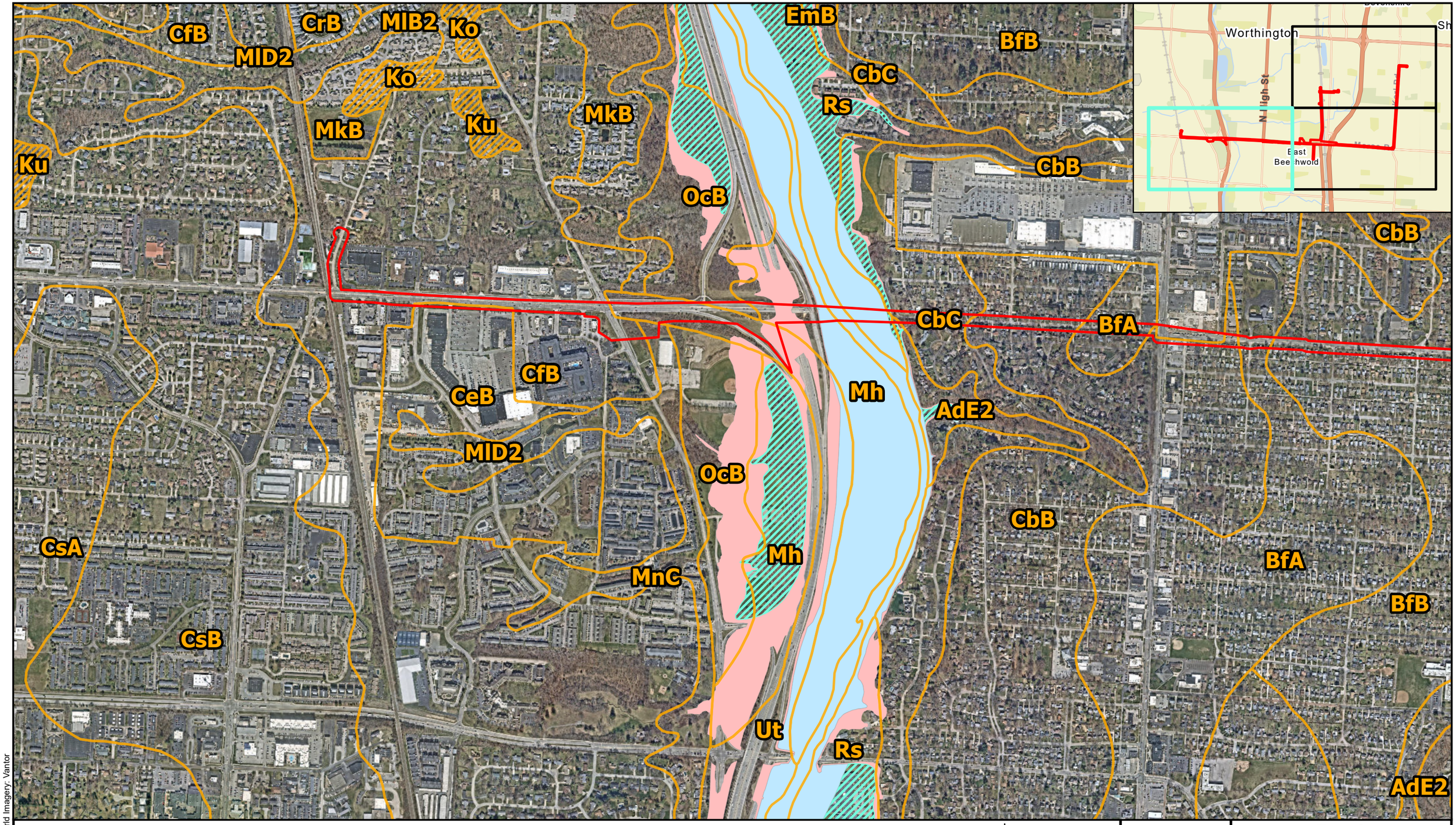
BURNS McDONNELL

Figure 3
Soils and Floodplain Map
NiSource NCHP Phase 6 Pipeline System Replacement Project
Franklin County, OH
Page 2 of 3

Service Layer Credits: World Imagery: Vantor

Source: FEMA, SSURGO, NiSource, Burns & McDonnell, and ESRI.

Issued: 1/23/2026



Survey Area
Soil Map Units
Majority Hydric Soils

FEMA Floodplain
500-Year Floodplain
100-Year Floodplain
Regulatory Floodway

NORTH

800 400 0 800

Scale in Feet

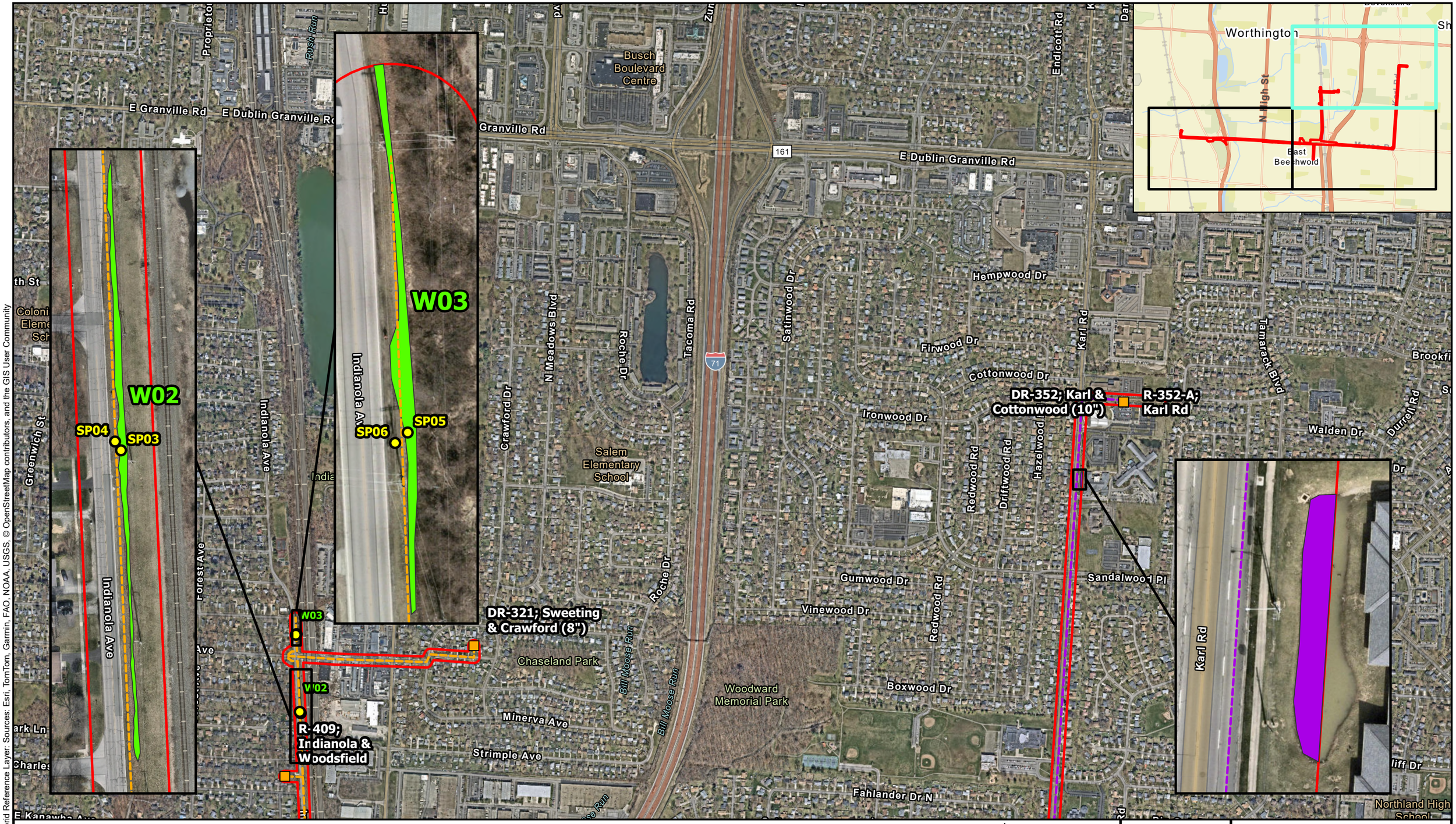
BURNS McDONNELL

Figure 3
Soils and Floodplain Map
NiSource NCHP Phase 6 Pipeline
System Replacement Project
Franklin County, OH
Page 3 of 3

Service Layer Credits: World Imagery: Vantor

Source: FEMA, SSURGO, NiSource, Burns & McDonnell, and ESRI.

Issued: 1/23/2026



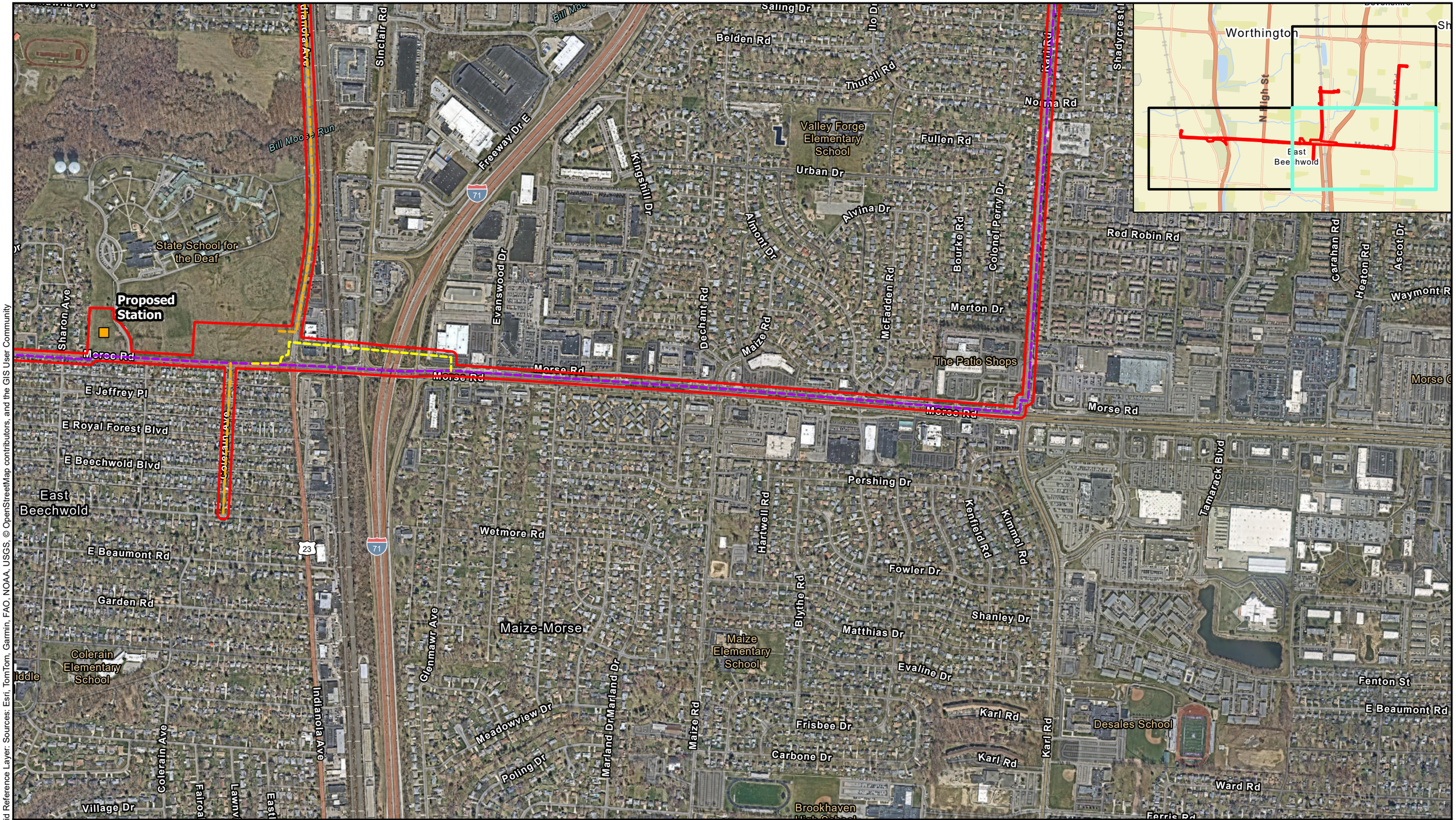
Service Layer Credits: Hybrid Reference Layer: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Source: NiSource, Burns & McDonnell, and ESRI.

BURNS McDONNELL

Figure 4
Wetland Delineation Map
NiSource NCHP Phase 6 Pipeline System Replacement Project
Franklin County, OH

Issued: 1/23/2026



Survey Area
Pond
Culvert
Sample Plot
Phase 6 Alignment
Phase 6 Alternate
Phase 6 Lateral
Stream (S)
Ephemeral
Intermittent
Perennial
Wetland (W)
Palustrine Emergent (PEM)

NORTH

800 400 0 800

Scale in Feet

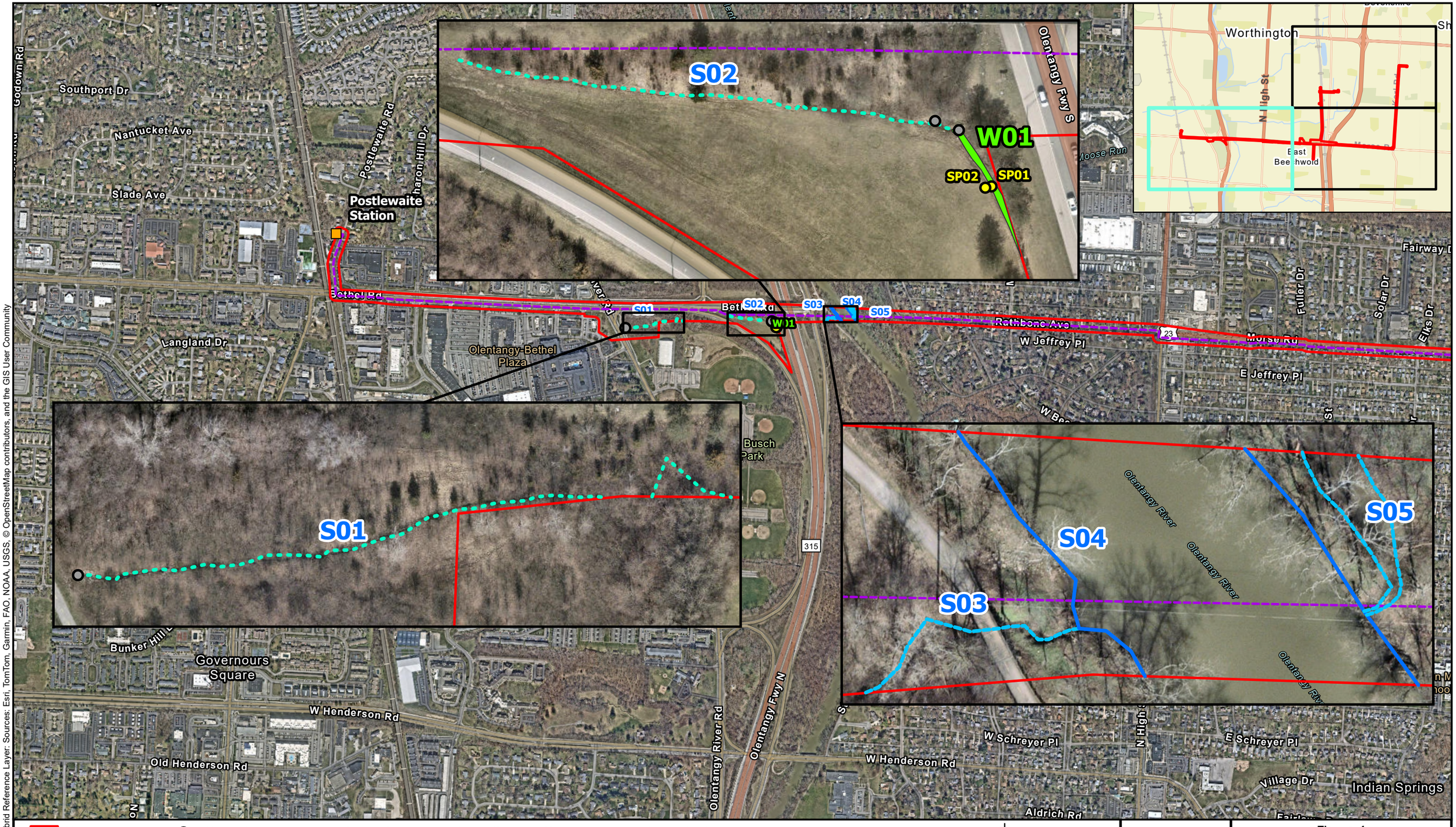
BURNS McDONNELL

Figure 4
Wetland Delineation Map
NiSource NCHP Phase 6 Pipeline System Replacement Project
Franklin County, OH
Page 2 of 3

Service Layer Credits: Hybrid Reference Layer: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Source: NiSource, Burns & McDonnell, and ESRI.

Issued: 1/23/2026



Survey Area
Pond
Culvert
Sample Plot
Phase 6 Alignment
Phase 6 Alternate
Phase 6 Lateral
Stream (S)
Ephemeral
Intermittent
Perennial
Wetland (W)
Palustrine Emergent (PEM)

NORTH

800 400 0 800

Scale in Feet

BURNS McDONNELL

Figure 4
Wetland Delineation Map
NiSource NCHP Phase 6 Pipeline System Replacement Project
Franklin County, OH
Page 3 of 3

Service Layer Credits: Hybrid Reference Layer: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Source: NiSource, Burns & McDonnell, and ESRI.

Issued: 1/23/2026

Appendix B – Photolog

Photo 1: View of Sample Plot (SP)01 located in PEM Wetland (W)01, facing north.

Photo 2: View of SP01 located in PEM W01, facing east.

Photo 3: View of SP01 located in PEM W01, facing south.

Photo 4: View of SP01 located in PEM W01, facing west.

Photo 5: View of upland SP02 associated with PEM W01, facing east.

Photo 6: View of SP03 located in PEM W02, facing north.

Photo 7: View of SP03 located in PEM W02, facing east.

Photo 8: View of SP03 located in PEM W02, facing south.

Photo 9: View of SP03 located in PEM W02, facing west.

Photo 10: View of upland SP04 associated with PEM W02, facing east.

Photo 11: View of SP05 located in PEM W03, facing north.

Photo 12: View of SP05 located in PEM W03, facing east.

Photo 13: View of SP05 located in PEM W03, facing south.

Photo 14: View of SP05 located in PEM W03, facing west.

Photo 15: View of upland SP06 associated with PEM W03, facing east.

Photo 16: View upstream of Ephemeral Stream (S)01, facing west.

Photo 17: View downstream of Ephemeral Stream S01, facing east.

Photo 18: View upstream of Ephemeral Stream S02, facing west.

Photo 19: View downstream of Ephemeral Stream S02, facing east.

Photo 20: View upstream of Intermittent Stream S03, facing west.

Photo 21: View downstream of Intermittent Stream S03, facing east.

Photo 22: View upstream of Perennial Stream S04 Olentangy River, facing north.

Photo 23: View downstream of Perennial Stream S04 Olentangy River, facing south.

Photo 24: View upstream of Intermittent Stream S05, facing north.

Photo 25: View downstream of Intermittent Stream S05, facing south.

Photo 26: View of manmade pond adjacent to Karl Rd., facing north.

Photo 27: View of Sweeting & Crawford Station, facing north.

Photo 28: View of Karl & Cottonwood Station, facing north.

Photo 29: View of Colerain lateral street area, facing north.

Appendix C – QHEI & HHEI Forms

Headwater Habitat Evaluation Index Field Form

Ohio Environmental Protection Agency

HHEI Score (sum of metrics 1+2+3) 16

SITE NAME/LOCATION NCTP Phase 6

SITE NUMBER S01 RIVER BASIN _____ RIVER CODE _____ DRAINAGE AREA (mi²) 0.001

LENGTH OF STREAM REACH (ft) 580 LAT 40.0629 LONG -83.0359 RIVER MILE _____

DATE 7/31/25 SCORER AH COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check *ONLY* two predominant substrate *TYPE* boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☒	SILT [3 pt]	85
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐	BEDROCK [16 pts]		☐	FINE DETRITUS [3 pts]	
☐	COBBLE (65-256 mm) [12 pts]		☐	CLAY or HARDPAN [0 pt]	
☐	GRAVEL (2-64 mm) [9 pts]		☐	MUCK [0 pts]	
☒	SAND (<2 mm) [6 pts]	15	☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0

(A) 9 (B) 2

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI Metric Points

Substrate Max = 40: 11

A + B

2. Maximum Pool Depth (*Measure the maximum pool depth within the 61 meter (200 feet)* evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5pts]
- ☒ NO WATER OR MOIST CHANNEL [0pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 0

Pool Depth Max = 30: 0

3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check *ONLY* one box):

- ☐ > 4.0 meters (> 13') [30 pts]
- ☐ > 3.0 m - 4.0 m (> 9' 7"- 13') [25 pts]
- ☐ > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☒ ≤ 1.0 m (≤ 3' 3") [5 pts]

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 1

Bankfull Width Max=30: 5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream★

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R	L	R
☐	☐ Wide >10m	☐	☐ Mature Forest, Wetland	☐	☐ Conservation Tillage
☒	☒ Moderate 5-10m	☒	☒ Immature Forest, Shrub or Old Field	☐	☐ Urban or Industrial
☐	☐ Narrow <5m	☐	☐ Residential, Park, New Field	☐	☐ Open Pasture, Row Crop
☐	☐ None	☐	☐ Fenced Pasture	☐	☐ Mining or Construction

COMMENTS _____

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (interstitial)
- ☐ Moist Channel, isolated pools, no flow (intermittent)
- ☒ Dry channel, no water (ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

☒ None	☐ 1.0	☐ 2.0	☐ 3.0
☐ 0.5	☐ 1.5	☐ 2.5	☐ >3

STREAM GRADIENT ESTIMATE

☒ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

NCHP Phase 6 SOP

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: _____ NRCS Soil Map Page: _____ NRCS Soil Map Stream Order: _____

County: _____ Township/City: _____

MISCELLANEOUS

Base Flow Conditions? (Y/N): _____ Date of last precipitation: _____ Quantity: _____

Photo-documentation Notes: _____

Elevated Turbidity? (Y/N): _____ Canopy (% open): _____

Were samples collected for water chemistry? (Y/N): _____ Lab Sample # or ID (attach results): _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (umhos/cm) _____

Is the sampling reach representative of the stream (Y/N) _____ If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _____ Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) _____ Species observed (if known): _____

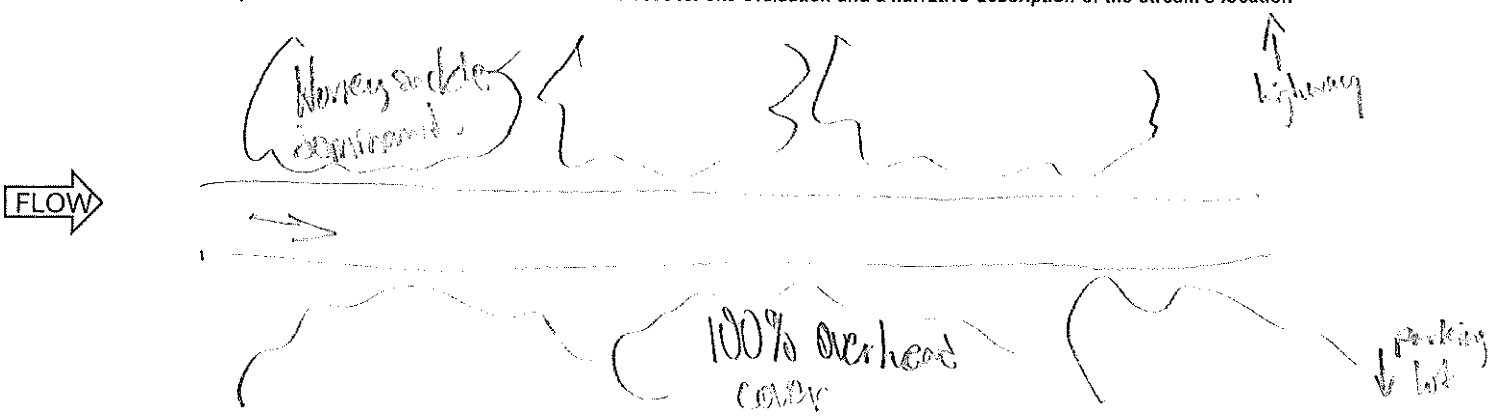
Salamanders Observed? (Y/N) _____ Species observed (if known): _____

Aquatic Macroinvertebrates Observed? (Y/N) _____ Species observed (if known): _____

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio Headwater Habitat Evaluation Index Field Form

Ohio Environmental Protection Agency

HHEI Score (sum of metrics 1+2+3) 28

SITE NAME/LOCATION NCHP Phase 6

SITE NUMBER 502 RIVER BASIN _____ RIVER CODE _____ DRAINAGE AREA (mi²) 0.009

LENGTH OF STREAM REACH (ft) 412 LAT 40.063045 LONG -83.032594 RIVER MILE _____

DATE 7/31/2025 SCORER AH COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☒ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check *ONLY* two predominant substrate *TYPE* boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B

TYPE		PERCENT	TYPE		PERCENT
☐	☐ BLDR SLABS [16 pts]		☐	☐ SILT [3 pt]	
☐	☐ BOULDER (>256 mm) [16 pts]		☐	☐ LEAF PACK/WOODY DEBRIS [3 pts]	
☐	☐ BEDROCK [16 pts]		☐	☐ FINE DETRITUS [3 pts]	
☐	☐ COBBLE (65-256 mm) [12 pts]	3	☐	☐ CLAY or HARDPAN [0 pt]	
☒	☐ GRAVEL (2-64 mm) [9 pts]	37	☐	☐ MUCK [0 pts]	
☐	☒ SAND (<2 mm) [6 pts]	60	☐	☐ ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 3 (A) 15 (B) 3

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 3

HHEI Metric Points

Substrate Max = 40

18

A + B

2. Maximum Pool Depth (*Measure the maximum pool depth within the 61 meter (200 feet)* evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐ > 30 centimeters [20 pts]	☐ 5 cm - 10 cm [15 pts]
☐ > 22.5 - 30 cm [30 pts]	☒ < 5 cm [5pts]
☐ > 10 - 22.5 cm [25 pts]	☐ NO WATER OR MOIST CHANNEL [0pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 4

Pool Depth Max = 30

5

3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check *ONLY* one box):

☐ > 4.0 meters (> 13') [30 pts]	☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐ > 3.0 m - 4.0 m (> 9' 7"- 13') [25 pts]	☒ ≤ 1.0 m (≤ 3' 3") [5 pts]
☐ > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 0.75

Bankfull Width Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★

RIPARIAN WIDTH (Per Bank)

L	R	
☐	☐	Wide >10m
☐	☐	Moderate 5-10m
☒	☐	Narrow <5m
☐	☒	None

FLOODPLAIN QUALITY (Most Predominant per Bank)

L	R	
☐	☐	Mature Forest, Wetland
☐	☐	Immature Forest, Shrub or Old Field
☐	☐	Residential, Park, New Field
☐	☐	Fenced Pasture
☐	☐	Conservation Tillage
☒	☒	Urban or Industrial
☐	☐	Open Pasture, Row Crop
☐	☐	Mining or Construction

COMMENTS _____

FLOW REGIME (*At Time of Evaluation*) (Check *ONLY* one box):

☐ Stream Flowing	☒ Moist Channel, isolated pools, no flow (Intermittent)
☐ Subsurface flow with Isolated pools (interstitial)	☐ Dry channel, no water (ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

☒ None	☐ 1.0	☐ 2.0	☐ 3.0
☐ 0.5	☐ 1.5	☐ 2.5	☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☒ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: _____ NRCS Soil Map Page: _____ NRCS Soil Map Stream Order: _____

County: _____ Township/City: _____

MISCELLANEOUS

Base Flow Conditions? (Y/N): _____ Date of last precipitation: 7/31/25 Quantity: _____

Photo-documentation Notes: _____

Elevated Turbidity? (Y/N): _____ Canopy (% open): _____

Were samples collected for water chemistry? (Y/N): _____ Lab Sample # or ID (attach results): _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (umhos/cm) _____

Is the sampling reach representative of the stream (Y/N) _____ If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____

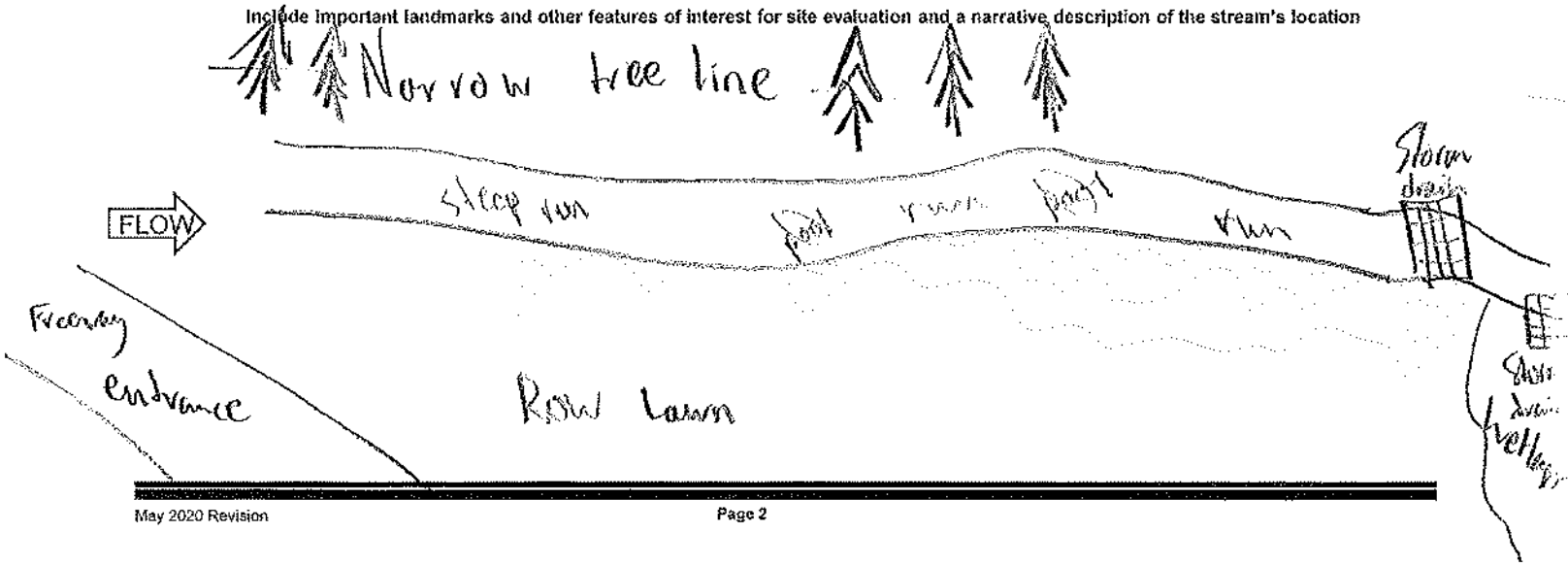
Salamanders Observed? (Y/N) N Species observed (if known): _____

Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _____

Comments Regarding Biology: No observations

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio Headwater Habitat Evaluation Index Field Form

Ohio Environmental Protection Agency

HHEI Score (sum of metrics 1+2+3) 84

SITE NAME/LOCATION NCHP Phase 6

SITE NUMBER 503 RIVER BASIN _____ RIVER CODE _____ DRAINAGE AREA (mi²) .0001

LENGTH OF STREAM REACH (ft) 135 LAT 40.063052 LONG -83.030870 RIVER MILE _____

DATE 7/31/25 SCORER AH COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☒ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check *ONLY* two predominant substrate *TYPE* boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B

TYPE		PERCENT	TYPE		PERCENT
☐	☐ BLDR SLABS [16 pts]		☐	☐ SILT [3 pt]	
☐	☐ BOULDER (>256 mm) [16 pts]	3	☐	☐ LEAF PACK/WOODY DEBRIS [3 pts]	
☐	☐ BEDROCK [16 pts]		☐	☐ FINE DETRITUS [3 pts]	
☐	☐ COBBLE (65-256 mm) [12 pts]	5	☐	☐ CLAY or HARDPAN [0 pt]	
☒	☐ GRAVEL (2-64 mm) [9 pts]	52	☐	☐ MUCK [0 pts]	
☐	☒ SAND (<2 mm) [6 pts]	40	☐	☐ ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 8 (A) 15 (B) 4

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 4

HHEI Metric Points

Substrate Max = 40: 19

A + B

2. Maximum Pool Depth (*Measure the maximum pool depth within the 61 meter (200 feet)* evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☒ > 10 - 22.5 cm [25 pts]
- ☐ 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5pts]
- ☐ NO WATER OR MOIST CHANNEL [0pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 15

Pool Depth Max = 30: 25

3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check *ONLY* one box):

- ☐ > 4.0 meters (> 13') [30 pts]
- ☐ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☒ > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (≤ 3' 3") [5 pts]

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 2

Bankfull Width Max=30: 20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★

RIPARIAN WIDTH (Per Bank) L	R		FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☒	☒	Wide >10m	☒	☒	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS _____

FLOW REGIME (*At Time of Evaluation*) (Check *ONLY* one box):

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (interstitial)
- ☐ Moist Channel, isolated pools, no flow (intermittent)
- ☐ Dry channel, no water (ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

☐ None	☐ 1.0	☐ 2.0	☐ 3.0
☒ 0.5	☐ 1.5	☐ 2.5	☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☒ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: _____ NRCS Soil Map Page: _____ NRCS Soil Map Stream Order: _____

County: _____ Township/City: _____

MISCELLANEOUS

Base Flow Conditions? (Y/N): _____ Date of last precipitation: 7/21/25 Quantity: _____

Photo-documentation Notes: _____

Elevated Turbidity? (Y/N): _____ Canopy (% open): _____

Were samples collected for water chemistry? (Y/N): _____ Lab Sample # or ID (attach results): _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (umhos/cm) _____

Is the sampling reach representative of the stream (Y/N) _____ If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____

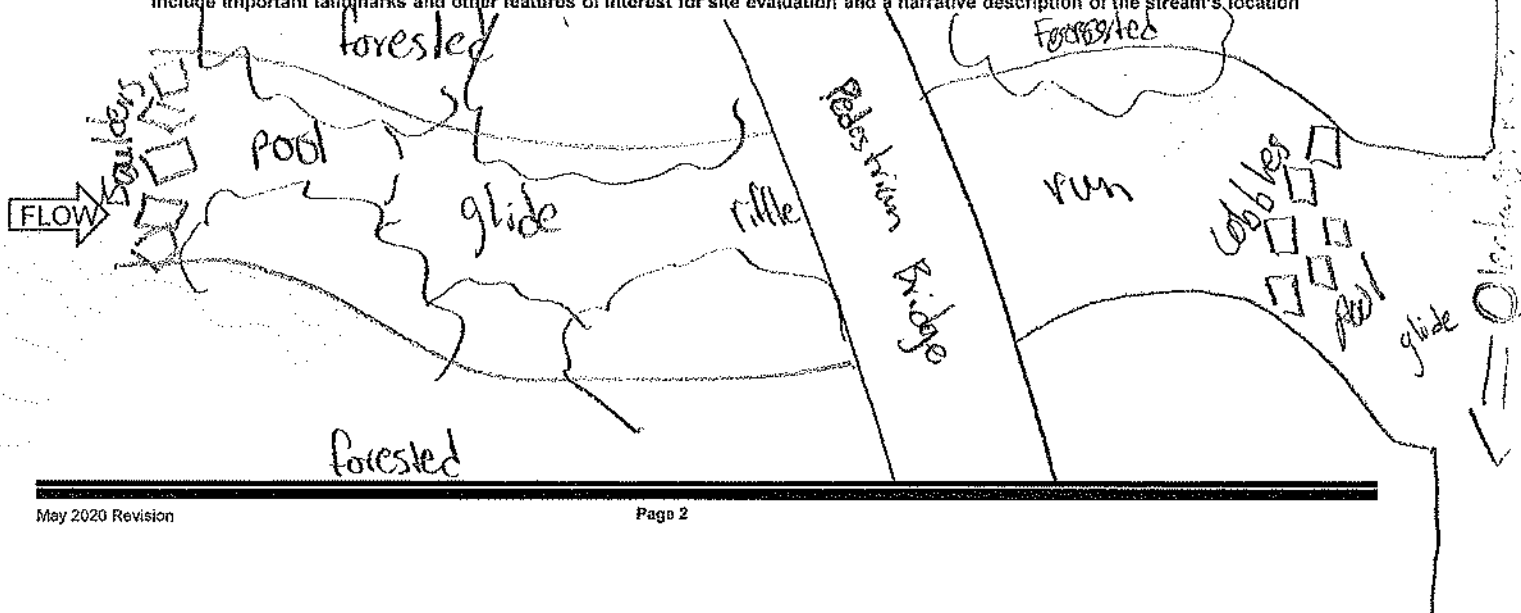
Salamanders Observed? (Y/N) N Species observed (if known): _____

Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _____

Comments Regarding Biology: No aquatic bio observations

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Ohio EPA — Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 66.5

Stream & Location: NCHP Phase 6 Olentangy RM: ___ Date: 07/31/25

Scorers Full Name & Affiliation: Antonio Hornstein BMeD

River Code: ___-___-___ STORET #: ___ Lat./Long.: 40.0631 / 83.0309 (NAD 83 - decimal °) Office verified location ☒

1] SUBSTRATE

Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐☐ BLDR /SLABS [10]	___	___	☐☐ HARDPAN [4]	___	___
☐☐ BOULDER [9]	10	___	☐☐ DETRITUS [3]	___	___
☒☐ COBBLE [8]	30	___	☐☐ MUCK [2]	___	___
☐☒ GRAVEL [7]	50	___	☐☐ SILT [2]	___	___
☐☐ SAND [6]	10	___	☐☐ ARTIFICIAL [0]	___	___
☐☐ BEDROCK [5]	___	___	(Score natural substrates; ignore sludge from point-sources)		

NUMBER OF BEST TYPES: ☒ 4 or more [2] ☐ 3 or less [0]

Check ONE (Or 2 & average)

ORIGIN	QUALITY	
☐ LIMESTONE [1]	☐ HEAVY [-2]	
☒ TILLS [1]	☐ MODERATE [-1]	Substrate
☐ WETLANDS [0]	SILT ☒ NORMAL [0]	18
☐ HARDPAN [0]	☐ FREE [1]	
☐ SANDSTONE [0]	☐ EXTENSIVE [-2]	
☐ RIP/RAP [0]	EMBEDDEDNESS ☐ MODERATE [-1]	Maximum 20
☐ LACUSTURINE [0]	☒ NORMAL [0]	
☐ SHALE [-1]	☐ NONE [1]	
☐ COAL FINES [-2]		

Comments

2] INSTREAM COVER

Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

___ UNDERCUT BANKS [1]	___ POOLS > 70cm [2]	___ OXBOWS, BACKWATERS [1]
2 OVERHANGING VEGETATION [1]	___ ROOTWADS [1]	___ AQUATIC MACROPHYTES [1]
___ SHALLOWS (IN SLOW WATER) [1]	___ BOULDERS [1]	___ LOGS OR WOODY DEBRIS [1]
___ ROOTMATS [1]		

AMOUNT (Check ONE (Or 2 & average))

☐ EXTENSIVE >75% [11]
☐ MODERATE 25-75% [7]
☒ SPARSE 5-<25% [3]
☐ NEARLY ABSENT <5% [1]

Comments

Cover Maximum 20: 4

3] CHANNEL MORPHOLOGY

Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☐ NONE [6]	☒ HIGH [3]
☒ MODERATE [3]	☒ GOOD [5]	☒ RECOVERED [4]	☐ MODERATE [2]
☐ LOW [2]	☐ FAIR [3]	☐ RECOVERING [3]	☐ LOW [1]
☐ NONE [1]	☐ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel Maximum 20: 15

4] BANK EROSION AND RIPARIAN ZONE

Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION (L / R)	RIPARIAN WIDTH (L / R)	FLOOD PLAIN QUALITY (L / R)
☐ ☒ NONE / LITTLE [3]	☐ ☐ WIDE > 50m [4]	☒ ☐ FOREST, SWAMP [3]
☐ ☐ MODERATE [2]	☐ ☒ MODERATE 10-50m [3]	☐ ☐ SHRUB OR OLD FIELD [2]
☐ ☐ HEAVY / SEVERE [1]	☐ ☐ NARROW 5-10m [2]	☐ ☑ RESIDENTIAL, PARK, NEW FIELD [1]
	☐ ☐ VERY NARROW < 5m [1]	☐ ☐ FENCED PASTURE [1]
	☐ ☐ NONE [0]	☐ ☐ OPEN PASTURE, ROWCROP [0]

☐☐ CONSERVATION TILLAGE [1]
☐☐ URBAN OR INDUSTRIAL [0]
☐☐ MINING / CONSTRUCTION [0]

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian Maximum 10: 8.5

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH (Check ONE (ONLY!))

☐ > 1m [6]
☒ 0.7-<1m [4]
☐ 0.4-<0.7m [2]
☐ 0.2-<0.4m [1]
☐ < 0.2m [0]

CHANNEL WIDTH (Check ONE (Or 2 & average))

☐ POOL WIDTH > RIFFLE WIDTH [2]
☒ POOL WIDTH = RIFFLE WIDTH [1]
☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY (Check ALL that apply)

☐ TORRENTIAL [-1] ☒ SLOW [1]
☐ VERY FAST [1] ☐ INTERSTITIAL [-1]
☐ FAST [1] ☐ INTERMITTENT [-2]
☐ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

Comments

Pool / Current Maximum 12: 6

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average). ☐ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☒ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☒ STABLE (e.g., Cobble, Boulder) [2]	☒ NONE [2]
☐ BEST AREAS 5-10cm [1]	☒ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☐ BEST AREAS < 5cm [metric=0]		☐ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☐ MODERATE [0] ☐ EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8: 7

6] GRADIENT

GRADIENT (4 ft/mi) ☐ VERY LOW - LOW [2-4] ☒ MODERATE [6-10] ☐ HIGH - VERY HIGH [10-6]

DRAINAGE AREA (515 mi²)

%POOL: ___ %GLIDE: 100
%RUN: ___ %RIFFLE: ___

Gradient Maximum 10: 8

EPA 4520 06/16/06

A] SAMPLED REACH

Check ALL that apply

METHOD

- ☐ BOAT
- ☐ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE

1st -sample pass-		2nd
☐	HIGH	☐
☐	UP	☐
☐	NORMAL	☐
☐	LOW	☐
☐	DRY	☐

DISTANCE

- ☐ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ☐ OTHER

_____ meters

CLARITY

1st --sample pass--		2nd
☐	< 20 cm	☐
☐	20-<40 cm	☐
☐	40-70 cm	☐
☐	> 70 cm/ CTB	☐
☐	SECCHI DEPTH	☐

CANOPY

- ☐ > 85%- OPEN
- ☐ 55%-<85%
- ☐ 30%-<55%
- ☐ 10%-<30%
- ☐ <10%- CLOSED

1st pass _____ cm

2nd _____ cm

C] RECREATION AREA DEPTH

POOL: ☐>100ft² ☐>3ft

Comment RE: Reach consistency/ Is reach typical of steam?, *Recreation/* Observed - Inferred, *Other/* Sampling observations, Concerns, Access directions, etc.

B] AESTHETICS

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOs/SSOs/OUTFALLS

D] MAINTENANCE

Circle some & *COMMENT*

PUBLIC / PRIVATE / BOTH / NA
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION-OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD-STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / DRAINAGE

E] ISSUES

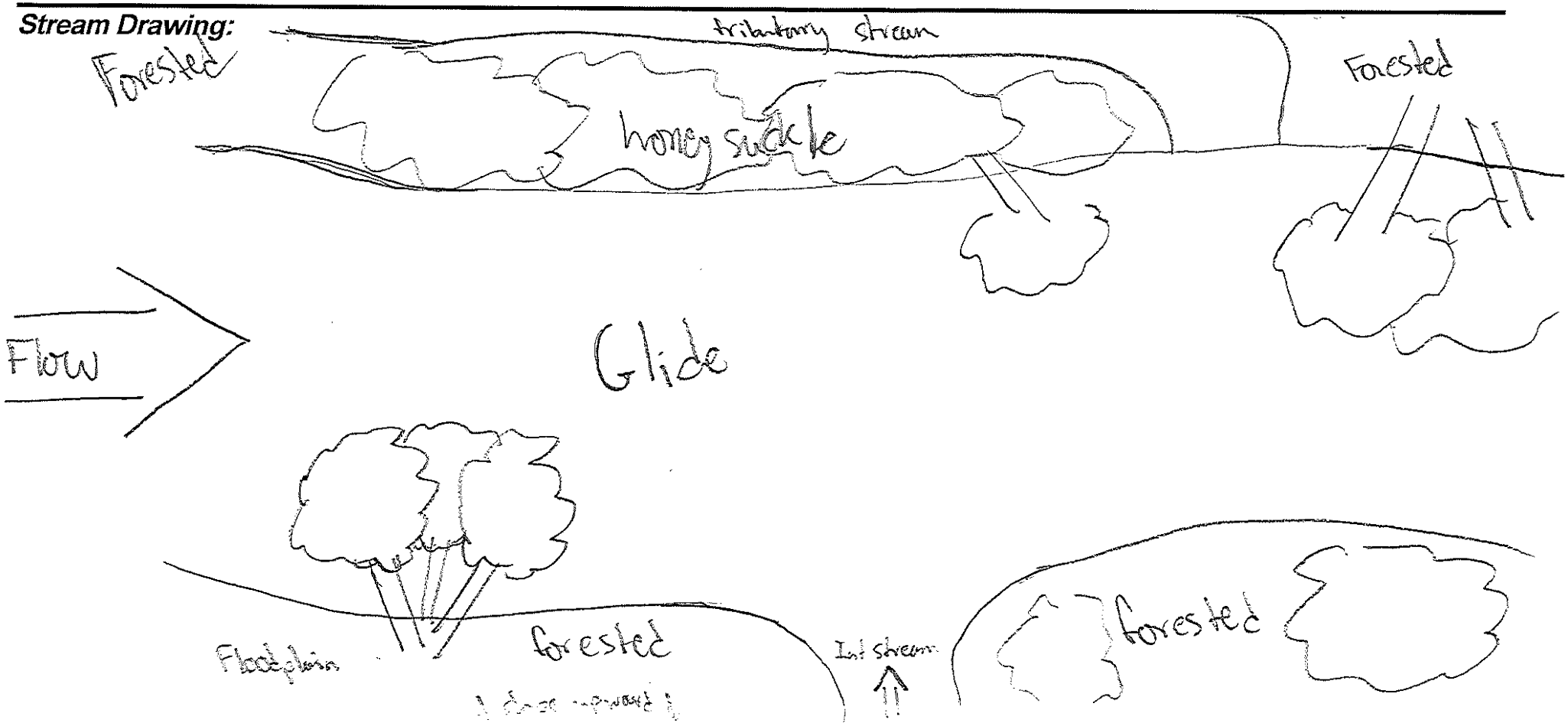
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

- $\bar{x}$ width
- $\bar{x}$ depth
- max. depth
- $\bar{x}$ bankfull width
- bankfull $\bar{x}$ depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio

Legacy Tree:

Stream Drawing:



Ohio Mussel Habitat Assessment Form

Project Information

Project Name: NCHP Phase 6 Pipeline System Replacement Project

County: Franklin Township: City of Columbus

Latitude (DD.DDDD): 40.0629 Longitude (DD.DDDD): 83.0295

Stream Name: Olentangy River Group # (From Appendix A): 1

Methods

Name of Surveyor(s): Antonio Hornstein, Ben Salupo, Audrey Cash, Christian Cortez

Qualification of Surveyor(s): ☐ USFWS Approved ☐ ODNR Approved ☑ Aquatic Biologist (minimum)

Date of Survey: July 31, 2025 Distance Surveyed (ft.): 319.36

Total Survey Time (min. x people): 48 Scientific Collector's Permit Number(s): n/a

Note any deviations from the Ohio Mussel Habitat Assessment Methods:

Reconnaissance survey only.

Habitat Description of Survey Area

Drainage Area at Survey Location (mi²): 515 Water Temp. (°F): n/a Air Temp. (°F): 71

Substrate Types (include %):

☐ Boulder	10	☑ Gravel	50	☐ Bedrock		☐ Detritus		☐ Silt	
☑ Cobble	30	☐ Sand	10	☐ Hardpan		☐ Muck		☐ Artificial	

Water Level: ☐ High ☐ Up ☑ Normal ☐ Low ☐ Dry/Interstitial

Visibility: ☐ 0-15 cm ☑ 15-30 cm ☐ 30-50 cm ☐ >50 cm ☐ Visible to Bottom

Average Depth (cm):	Riffle	50	Run	20	Pool	50
Max Depth (cm):	Riffle	85	Run	30	Pool	85

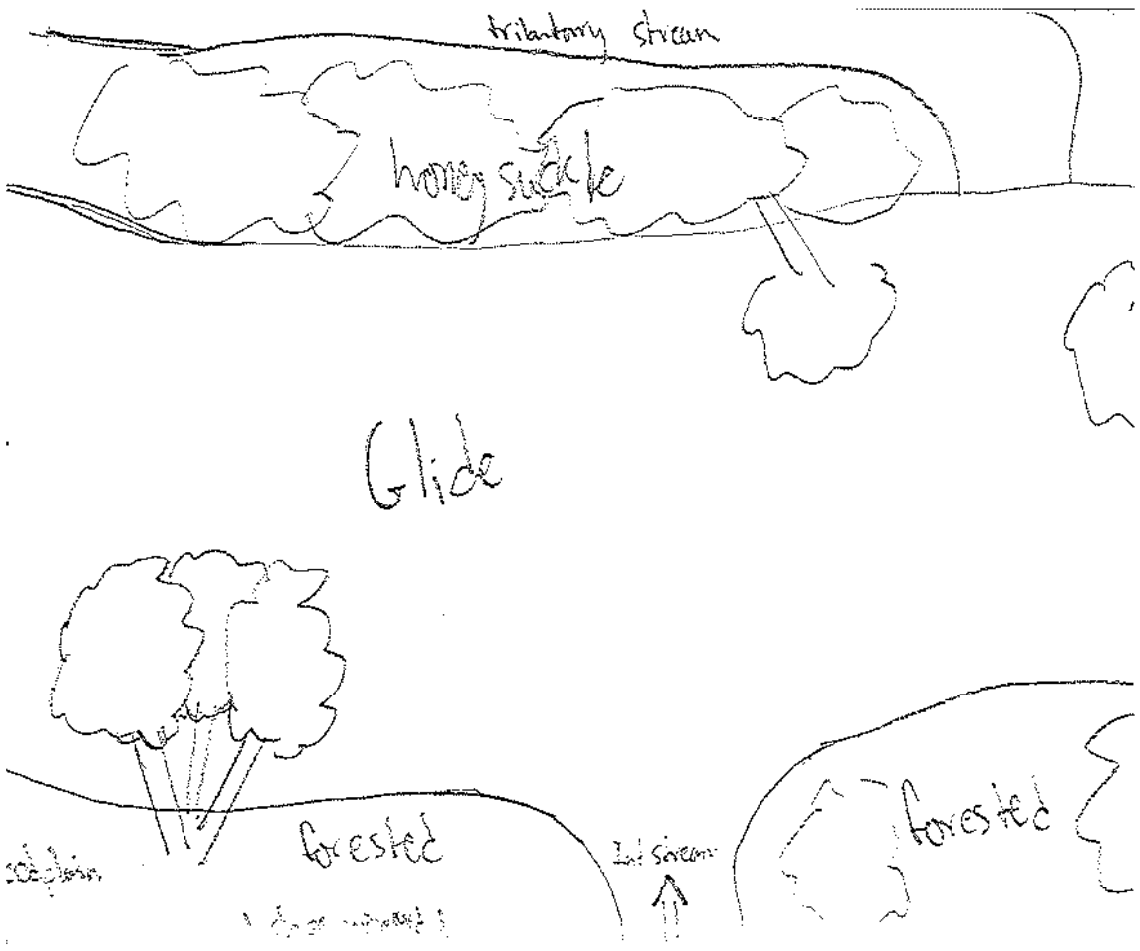
Results

Evidence of Mussels: Presence of fresh dead mussel shells and living mussels will trigger a full mussel survey

☐ None ☐ Mussel Shell Only - Subfossil ☒ Mussel Shell Only - Weathered Dead ☐ Mussel Shell Only - Fresh Dead ☐ Living Mussels

Site Sketch. Approximate numbers and locations of shells and live mussels. Include species list if possible.

See Photo of Mussel shells on next page



Required Attachments 1) Location Map and 2) Photo Log

Results

Headwater Habitat Evaluation Index Field Form

HHEI Score (sum of metrics 1+2+3) 46

SITE NAME/LOCATION NCHP Phase 6

SITE NUMBER SB01 RIVER BASIN _____ RIVER CODE _____ DRAINAGE AREA (mi²) 0.001

LENGTH OF STREAM REACH (ft) 105 LAT _____ LONG _____ RIVER MILE _____

DATE 7/31/25 SCORER Ben Salyer COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check *ONLY* two predominant substrate *TYPE* boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☒	SILT [3 pt]	40
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐	BEDROCK [16 pts]		☐	FINE DETRITUS [3 pts]	
☐	COBBLE (65-256 mm) [12 pts]	10	☐	CLAY or HARDPAN [0 pt]	
☒	GRAVEL (2-64 mm) [9 pts]	30	☐	MUCK [0 pts]	
☐	SAND (<2 mm) [6 pts]	20	☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock _____ (A) 12

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

(B) 4

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI Metric Points

Substrate Max = 40

16

A + B

2. Maximum Pool Depth (*Measure the maximum pool depth within the 61 meter (200 feet)* evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ 5 cm - 10 cm [15 pts]
- ☒ < 5 cm [5pts]
- ☐ NO WATER OR MOIST CHANNEL [0pts]

COMMENTS _____ **MAXIMUM POOL DEPTH (centimeters):** 4

Pool Depth Max = 30

5

3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check *ONLY* one box):

- ☐ > 4.0 meters (> 13') [30 pts]
- ☒ > 3.0 m - 4.0 m (> 9' 7"- 13') [25 pts]
- ☐ > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (≤ 3' 3") [5 pts]

COMMENTS _____ **AVERAGE BANKFULL WIDTH (meters)** 3.5

Bankfull Width Max=30

25

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream★

RIPARIAN WIDTH (Per Bank) L	R		FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☒	☒	Wide >10m	☒	☒	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS _____

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (interstitial)
- ☒ Moist Channel, isolated pools, no flow (intermittent)
- ☐ Dry channel, no water (ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

☐ None	☐ 1.0	☐ 2.0	☐ 3.0
☐ 0.5	☒ 1.5	☐ 2.5	☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☒ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? ☐ Yes ☐ No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: _____ NRCS Soil Map Page: _____ NRCS Soil Map Stream Order: _____

County: _____ Township/City: _____

MISCELLANEOUS

Base Flow Conditions? (Y/N): _____ Date of last precipitation: _____ Quantity: _____

Photo-documentation Notes: _____

Elevated Turbidity? (Y/N): _____ Canopy (% open): _____

Were samples collected for water chemistry? (Y/N): _____ Lab Sample # or ID (attach results): _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (umhos/cm) _____

Is the sampling reach representative of the stream (Y/N) ____ If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _____ Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) _____ Species observed (if known): _____

Salamanders Observed? (Y/N) _____ Species observed (if known): _____

Aquatic Macroinvertebrates Observed? (Y/N) _____ Species observed (if known): _____

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

Appendix D – ORAM Forms

Site: NCHP Phase 6 W01	Rater(s): Antonio Hornstein	Date: 07/31/25

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

1 (max 14 pts.) | 1 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [x] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [x] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

12 (max 30 pts.) | 13 (subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [x] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [x] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [x] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

4 (max 20 pts.) | 17 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [x] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

17 (subtotal this page)

last revised 1 February 2001 jjm

Site: NCHP Phase 6 W01	Rater(s): Antonio Hornstein	Date: 07/31/25

17
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 17 subtotal

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

-5 max 20 pts. | 12 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [0] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [X] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [0] Vegetated hummucks/tussucks
- [0] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [0] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

12

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES **NO**	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES **NO**	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES **NO**	If yes, Category 3.
	Question 4. Significant bird habitat	YES **NO**	If yes, Category 3.
	Question 5. Category 1 Wetlands	**YES** NO	If yes, Category 1.
	Question 6. Bogs	YES **NO**	If yes, Category 3.
	Question 7. Fens	YES **NO**	If yes, Category 3.
	Question 8a. Old Growth Forest	YES **NO**	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES **NO**	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES **NO**	If yes, Category 3
	Question 11. Relict Wet Prairies	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	12	
	Metric 4. Habitat	4	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-5	
	TOTAL SCORE	12	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Site: NCHP Phase 6 W02	Rater(s): Ben Salupo	Date: 07/31/25

Metric 1. Wetland Area (size).

max 6 pts.	subtotal
1	1

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [x] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

max 14 pts.	subtotal
1	2

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [x] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [x] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

max 30 pts.	subtotal
8	10

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [x] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [x] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [x] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

max 20 pts.	subtotal
3	13

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [x] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

13
subtotal this page

last revised 1 February 2001 jjm

Site: NCHP Phase 6 W02	Rater(s): Ben Salupo	Date: 07/31/25

13
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 13 subtotal

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

-1 max 20 pts. | 12 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [X] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [X] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [0] Vegetated hummucks/tussucks
- [0] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [0] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

12

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES **NO**	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES **NO**	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES **NO**	If yes, Category 3.
	Question 4. Significant bird habitat	YES **NO**	If yes, Category 3.
	Question 5. Category 1 Wetlands	**YES** NO	If yes, Category 1.
	Question 6. Bogs	YES **NO**	If yes, Category 3.
	Question 7. Fens	YES **NO**	If yes, Category 3.
	Question 8a. Old Growth Forest	YES **NO**	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES **NO**	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES **NO**	If yes, Category 3
	Question 11. Relict Wet Prairies	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	8	
	Metric 4. Habitat	3	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE	12	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Site: NCHP Phase 6 W03	**Rater(s):** Ben Salupo	**Date:** 07/31/25

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

1 (max 14 pts.) | 1 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [x] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [x] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

8 (max 30 pts.) | 9 (subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [x] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [x] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [x] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

3 (max 20 pts.) | 12 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [x] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

12 (subtotal this page)

last revised 1 February 2001 jjm

Site: NCHP Phase 6 W03	Rater(s): Ben Salupo	Date: 07/31/25

12
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 12 subtotal

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

-1 max 20 pts. | 11 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [X] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [X] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [0] Vegetated hummucks/tussucks
- [0] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [0] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

11

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES **NO**	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES **NO**	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES **NO**	If yes, Category 3.
	Question 4. Significant bird habitat	YES **NO**	If yes, Category 3.
	Question 5. Category 1 Wetlands	**YES** NO	If yes, Category 1.
	Question 6. Bogs	YES **NO**	If yes, Category 3.
	Question 7. Fens	YES **NO**	If yes, Category 3.
	Question 8a. Old Growth Forest	YES **NO**	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES **NO**	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES **NO**	If yes, Category 3
	Question 11. Relict Wet Prairies	YES **NO**	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	8	
	Metric 4. Habitat	3	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE	11	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Appendix E – Wetland Determination Data Forms

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: NCHP Phase 6 City/County: Columbus/Franklin County Sampling Date: 2025-07-31
Applicant/Owner: NiSource State: Ohio Sampling Point: SP01
Investigator(s): A. Hornstein and C. Cortez Section, Township, Range: NW T1N R18W
Landform (hillside, terrace, etc.): Local relief (concave, convex, none):
Slope (%): Lat: 40.06254186 Long: -83.03199664 Datum: WGS 84
Soil Map Unit Name: Ut - Udorthents-Urban land complex, gently rolling NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✔ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ___ No ✔
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✔	No ___	**Is the Sampled Area within a Wetland?** Yes ✔ No ___
Hydric Soil Present?	Yes ✔	No ___	
Wetland Hydrology Present?	Yes ✔	No ___	

Remarks:
Located in WA01

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Salix interior	10	✔	FACW
2.			
3.			
4.			
5.			
	10 =Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Typha angustifolia	100	✔	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 100	x 1 = 100
FACW species 10	x 2 = 20
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 110 (A)	120 (B)

Prevalence Index = B/A = 1.09

Hydrophytic Vegetation Indicators:
✔ 1 - Rapid Test for Hydrophytic Vegetation
✔ 2 - Dominance Test is >50%
✔ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ___

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

SOIL

Sampling Point: SP01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 2	10YR 4/1	100					Silty Clay	
3 - 6	10YR 4/1	95	10YR 5/6	5	C	PL	Silty Clay	
6 - 12	10YR 4/4	50	10YR 6/4	8	C	M	Silty Clay	
6 - 12	10R 5/1	42					Silty Clay	
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ✔ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21) Very
- ___ Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 12

Hydric Soil Present? Yes ✔ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ✔ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✔ Geomorphic Position (D2)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No ✔	Depth (inches): ___
Water Table Present?	Yes ___	No ✔	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ✔	Depth (inches): ___

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION Continued – Use scientific names of plants. Sampling Point: SP01

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	=Total Cover		
Sapling/Shrub Stratum			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	10 =Total Cover		
Herb Stratum			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
	100 =Total Cover		
Woody Vine Stratum			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

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

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: NCHP Phase 6 City/County: Columbus/Franklin County Sampling Date: 2025-07-31

Applicant/Owner: NiSource State: Ohio Sampling Point: SP02

Investigator(s): A. Hornstein and C. Cortez Section, Township, Range: NW T1N R18W

Landform (hillside, terrace, etc.): Local relief (concave, convex, none):

Slope (%): Lat: 40.06254515 Long: -83.03207377 Datum: WGS 84

Soil Map Unit Name: Ut - Udorthents-Urban land complex, gently rolling NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✔ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✔

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No ✔	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ____	No ✔	

Remarks:
Next to WA01

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Carex blanda	50	✔	FAC
2. Poa pratensis	50	✔	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 100	x 3 = 300
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 100 (A)	300 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
✔ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✔

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

SOIL

Sampling Point: SP02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 4	10YR 3/1	100					Silt Loam	
4 - 6	10YR 3/1	96	10YR 3/6	4	C	M	Silt Loam	
6 - 12	10YR 3/1	100					Silt Loam	
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21) Very
- ___ Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 12

Hydric Soil Present? **Yes** ___ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No ✔	Depth (inches): ___
Water Table Present?	Yes ___	No ✔	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ✔	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION Continued – Use scientific names of plants. Sampling Point: SP02

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	=Total Cover		
Sapling/Shrub Stratum			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	=Total Cover		
Herb Stratum			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
	100	=Total Cover	
Woody Vine Stratum			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

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

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: NCHP Phase 6 City/County: Columbus/Franklin County Sampling Date: 2025-07-31
Applicant/Owner: NiSource State: Ohio Sampling Point: SP03
Investigator(s): B. Salupo and A. Cash Section, Township, Range: SW T2N R18W
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave
Slope (%): 1 Lat: 40.0734682 Long: -83.00091227 Datum: NAD 83
Soil Map Unit Name: BfA - Bennington-Urban land complex, 0 to 2 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✔ (If no, explain in Remarks.)
Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✔
Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ✔ No ____
Hydric Soil Present? Yes ✔ No ____
Wetland Hydrology Present? Yes ✔ No ____

Is the Sampled Area within a Wetland? **Yes** ✔ **No** ____

Remarks:
Within PEM W02

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Typha latifolia	60	✔	OBL
2. Juncus effusus	30	✔	OBL
3. Dipsacus laciniatus	15		UPL
4. Panicum virgatum	10		FAC
5. Carex sp	5		FACW
6.			
7.			
8.			
9.			
10.			
	120 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 90	x 1 = 90
FACW species 5	x 2 = 10
FAC species 10	x 3 = 30
FACU species 0	x 4 = 0
UPL species 15	x 5 = 75
Column Totals: 120 (A)	205 (B)

Prevalence Index = B/A = 1.70

Hydrophytic Vegetation Indicators:
✔ 1 - Rapid Test for Hydrophytic Vegetation
✔ 2 - Dominance Test is >50%
✔ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ✔ **No** ____

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

SOIL

Sampling Point: SP03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 12	10YR 3/1	90	7.5YR 5/6	10	C	M	Clay Loam	
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21) Very
- ___ Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✔ Geomorphic Position (D2)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✔	No ___	Depth (inches): 2
Water Table Present?	Yes ✔	No ___	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ✔	No ___	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION Continued – Use scientific names of plants. Sampling Point: SP03

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	=Total Cover		
Sapling/Shrub Stratum			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	=Total Cover		
Herb Stratum			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
	120	=Total Cover	
Woody Vine Stratum			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

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

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: NCHP Phase 6 City/County: Columbus/Franklin County Sampling Date: 2025-07-31
Applicant/Owner: NiSource State: Ohio Sampling Point: SP04
Investigator(s): B. Salupo and A. Cash Section, Township, Range: SW T2N R18W
Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave
Slope (%): 2 Lat: 40.07353199 Long: -83.00098999 Datum: NAD 83
Soil Map Unit Name: BfA - Bennington-Urban land complex, 0 to 2 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✔ (If no, explain in Remarks.)
Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✔
Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No ✔
Hydric Soil Present? Yes ____ No ✔
Wetland Hydrology Present? Yes ____ No ✔

Is the Sampled Area within a Wetland? **Yes** ____ **No** ✔

Remarks:
Upland Sample Plot located adjacent to PEM W02

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Poa pratensis	50	✔	FAC
2. Schedonorus arundinaceus	25	✔	FACU
3. Lotus tenuis	15		FACU
4. Trifolium pratense	10		FACU
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 50	x 3 = 150
FACU species 50	x 4 = 200
UPL species 0	x 5 = 0
Column Totals: 100 (A)	350 (B)

Prevalence Index = B/A = 3.50

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** ✔

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

SOIL

Sampling Point: SP04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 6	10YR 3/2	100						
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21) Very
- ___ Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Compact

Depth (inches): 6

Hydric Soil Present? Yes ___ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No ✔	Depth (inches): ___
Water Table Present?	Yes ___	No ✔	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ✔	Depth (inches): ___

Wetland Hydrology Present? Yes ___ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION Continued – Use scientific names of plants. Sampling Point: SP04

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	=Total Cover		
Sapling/Shrub Stratum			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	=Total Cover		
Herb Stratum			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
	100	=Total Cover	
Woody Vine Stratum			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

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

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: NCHP Phase 6 City/County: Columbus/Franklin County Sampling Date: 2025-07-31
Applicant/Owner: NiSource State: Ohio Sampling Point: SP05
Investigator(s): B. Salupo and A. Cash Section, Township, Range: SW T2N R18W
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave
Slope (%): 1 Lat: 40.07538726 Long: -83.00104899 Datum: NAD 83
Soil Map Unit Name: BfA - Bennington-Urban land complex, 0 to 2 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✔ (If no, explain in Remarks.)
Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✔
Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ✔ No ____
Hydric Soil Present? Yes ✔ No ____
Wetland Hydrology Present? Yes ✔ No ____

Is the Sampled Area within a Wetland? **Yes** ✔ **No** ____

Remarks:
Within PEM W03

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Typha latifolia	40	✔	OBL
2. Carex sp	20	✔	FACW
3. Scirpus atrovirens	15		OBL
4. Phalaris arundinacea	10		FACW
5. Toxicodendron radicans	5		FAC
6.			
7.			
8.			
9.			
10.			
	90	=Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 55	x 1 = 55
FACW species 30	x 2 = 60
FAC species 5	x 3 = 15
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 90 (A)	130 (B)

Prevalence Index = B/A = 1.44

Hydrophytic Vegetation Indicators:
✔ 1 - Rapid Test for Hydrophytic Vegetation
✔ 2 - Dominance Test is >50%
✔ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ✔ **No** ____

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

SOIL

Sampling Point: SP05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 3/2	95	7.5YR 5/6	5	C	M	Clay Loam	
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21) Very
- ___ Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✔ Geomorphic Position (D2)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✔	No ___	Depth (inches): 1
Water Table Present?	Yes ✔	No ___	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ✔	No ___	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION Continued – Use scientific names of plants. Sampling Point: SP05

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
		=Total Cover	
Sapling/Shrub Stratum			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
		=Total Cover	
Herb Stratum			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
	90	=Total Cover	
Woody Vine Stratum			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

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

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: NCHP Phase 6 City/County: Columbus/Franklin County Sampling Date: 2025-07-31
Applicant/Owner: NiSource State: Ohio Sampling Point: SP06
Investigator(s): B. Salupo and A. Cash Section, Township, Range: SW T2N R18W
Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
Slope (%): 3 Lat: 40.07537288 Long: -83.0010766 Datum: NAD 83
Soil Map Unit Name: BfA - Bennington-Urban land complex, 0 to 2 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✔ (If no, explain in Remarks.)
Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✔
Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No ✔
Hydric Soil Present? Yes ____ No ✔
Wetland Hydrology Present? Yes ____ No ✔

Is the Sampled Area within a Wetland? **Yes** ____ **No** ✔

Remarks:
Upland Sample Plot adjacent to PEM W03

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Poa pratensis	70	✔	FAC
2. Plantago lanceolata	20	✔	FACU
3. Phalaris arundinacea	5		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	95 =Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	70	x 3 =	210
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	95 (A)		300 (B)

Prevalence Index = B/A = 3.15

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** ✔

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

SOIL

Sampling Point: SP06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 3/3							
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21) Very
- ___ Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Compact

Depth (inches): 4

Hydric Soil Present? Yes ___ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): ___

Water Table Present? Yes ___ No ✔ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): ___

Wetland Hydrology Present? Yes ___ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION Continued – Use scientific names of plants. Sampling Point: SP06

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
		=Total Cover	
Sapling/Shrub Stratum			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
		=Total Cover	
Herb Stratum			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
	95	=Total Cover	
Woody Vine Stratum			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

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

Appendix F - Agency Correspondence and Species Lists

United States Department of the Interior

FISH AND WILDLIFE SERVICE

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

February 10, 2026

Project Code: 2026-0040109

Dear Mr. Cortez:

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

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

Seasonal Restrictions for Federally Listed Bat Species: Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. If bridges or culverts will be impacted, we recommend reviewing Appendix K in the most recent "Range-Wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines" to determine if the bridge/culvert may be suitable roost habitat. We recommend impacts to suitable bridges and culverts only occur from October 1 and March 31. These seasonal restrictions are recommended to avoid adverse effects to Indiana bats and northern long-eared bats.

If implementation of this seasonal restriction on tree cutting and impacting suitable bridge/culvert roosts is not possible, a summer presence/absence survey may be conducted for Indiana bats and northern long-eared bats. If Indiana bats and northern long-eared bats are not detected during the survey, then tree clearing and impacts to bridge/culvert roosts may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

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

On December 12, 2024 the Service proposed to list the monarch butterfly (*Danaus plexippus plexippus*) as threatened under the ESA. Monarch butterflies are found throughout Ohio and some populations migrate vast distances across multiple generations each year. Many monarchs fly between the U.S., Mexico and Canada – a journey of over 3,000 miles. Monarch populations have declined significantly in recent years. Threats include habitat loss – particularly the loss of milkweed, the monarch caterpillar's sole food source – and mortality resulting from pesticide use. The Service recommends the following actions to maintain habitat and avoid impacts to monarchs in Ohio: revegetate disturbed areas with native plant species including nectar-producing plants and milkweed endemic to the area; limit mowing monarch habitat from March 15 to August 31 when monarchs are breeding and from September 1 to October 31 when large numbers of monarchs are migrating; and avoid the use of pesticides and herbicides in and near monarch habitat.

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

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best

management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

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

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

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

Sincerely,

Erin Knoll
Field Office Supervisor

cc: Matthew.Stooksbury@dnr.ohio.gov
Eileen.Wyza@dnr.ohio.gov

2/3/2026

Attention: Field Office Supervisor
U.S. Fish and Wildlife Service
4265 Morse Road, Suite 104
Columbus, OH 43230

Re: Project Review Request, NCHP Phase 6 Pipeline System Replacement Project
IPaC #: 2026-0040109
Franklin County, Ohio

Dear Sir or Madame,

NiSource is formally requesting an updated review from the U.S. Fish and Wildlife Service (USFWS) for the proposed North Columbus High Pressure Pipeline (NCHP) Phase 6 Pipeline System Replacement Project located in Franklin County, Ohio (Figure 1). The Project is within the City of Columbus and Perry and Sharon Townships. Phase 6 includes the replacement of approximately 5.22 miles of 20-inch pipeline, a new station and several associated lateral connections.

The project was previously submitted to the USFWS for review on August 5, 2025 (IPaC #: 2025-0127956). An email response (Attachment 1) received on August 7, 2025 recommended seasonal tree clearing to avoid adverse impacts to Indiana bats (*Myotis sodalis*) and northern long-eared bats (*Myotis septentrionalis*).

The Project has been updated with a new location for the proposed station, now situated within the property of the Ohio School for the Deaf. This location is marked with a green boundary on Figure 1.

Please provide us with updated information on federally listed threatened and endangered species at your earliest convenience. For ease of review, we have included a project location map (Figure 1), shapefiles of the project survey boundary, previous correspondence (Attachment 1), and an updated IPaC official species list (Attachment 2).

530 West Spring Street, Suite 100 \ Columbus OH 43215
O 614-453-7800 \ burnsmcd.com

If you have questions or need additional information regarding the Project, please contact me at the phone number or email below. Thank you for your assistance with this request.

Sincerely,

Brooke Harrison
Project Manager
bharrison@burnsmcd.com
(380) 390-2516

Burns & McDonnell
Attn. Brooke Harrison
530 West Spring Street, Suite 100
Columbus, OH 43215

Cc:

Christian Cortez, Burns & McDonnell

FIGURE 1 – SITE LOCATION MAP

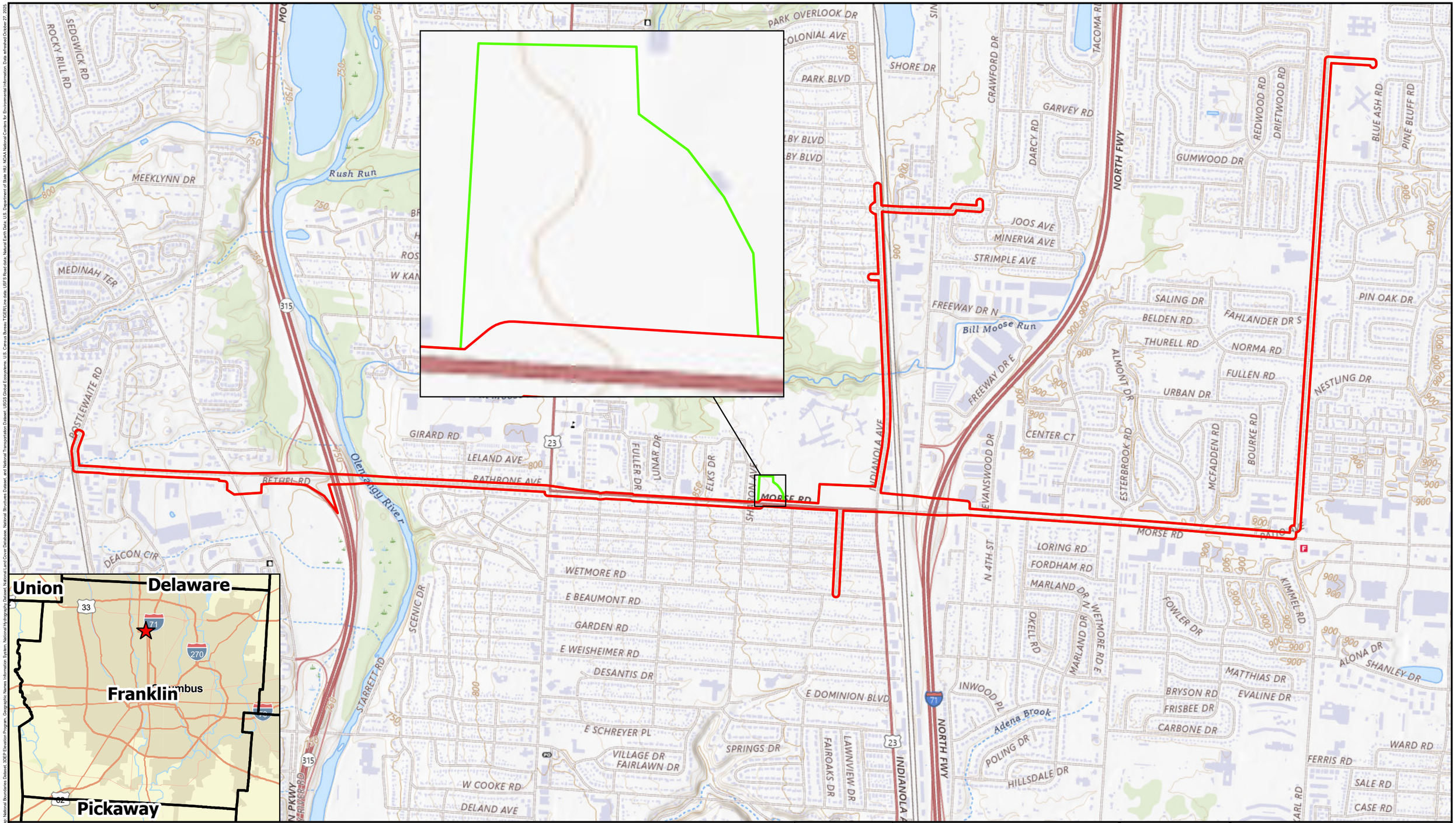


Figure 1: Vicinity Map
NCHP Phase 6 Pipeline System Replacement Project
NiSource
Franklin County, OH

Issued: 1/23/2026

Source: NiSource, Burns & McDonnell, USGS, and ESRI.

Service Layer Credits: USGS Topo: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State INT; NOAA National Centers for Environmental Information. Data refreshed October 27, 2025.

ATTACHMENT 1 – PREVIOUS USFWS CORRESPONDENCE

United States Department of the Interior

FISH AND WILDLIFE SERVICE

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

August 7, 2025

Project Code: 2025-0127956

Dear Ms. Harrison:

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

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

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

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats and northern long-eared bats. If Indiana bats and northern long-eared bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

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

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

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

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

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

Sincerely,

Erin Knoll
Field Office Supervisor

cc: Matthew.Stooksbury@dnr.ohio.gov
Eileen.Wyza@dnr.ohio.gov

ATTACHMENT 2 – UPDATED IPaC OFFICIAL SPECIES LIST

United States Department of the Interior

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

In Reply Refer To: 01/23/2026 13:20:57 UTC
Project Code: 2026-0040109
Project Name: NCHP Phase 6 Pipeline System Replacement Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Requests for additional technical assistance or consultation from the Ohio Field Office should be submitted following guidance on the following page https://www.fws.gov/office/ohio-ecological-services/request-project-review. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

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

PROJECT SUMMARY

Project Code: 2026-0040109
Project Name: NCHP Phase 6 Pipeline System Replacement Project
Project Type: Pipeline - Onshore - Maintenance / Modification - Below Ground
Project Description: Project includes the replacement of approximately 5.22 miles of 20-inch pipeline, a new station and several associated lateral connections. The Project will mainly be constructed within public road right-of-way and private permanent pipeline easements.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.0696955,-82.97657126191665,14z

Counties: Franklin County, Ohio

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

MAMMALS

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

CLAMS

NAME	STATUS
Round Hickorynut *Obovaria subrotunda* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9879	Threatened
Salamander Mussel *Simpsonaias ambigua* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6208	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

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

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

IPAC USER CONTACT INFORMATION

Agency:	Private Entity
Name:	Christian Cortez
Address:	530 W Spring St.
Address Line 2:	Suite 100
City:	Columbus
State:	OH
Zip:	43215
Email	ccortez@burnsmcd.com
Phone:	7143514228

Department of Natural Resources
ohiodnr.gov

Mike DeWine, *Governor*
Jim Tressel, *Lt. Governor*
Mary Mertz, *Director*

Office of Real Estate & Land Management
Tara Paciorek - Chief
2045 Morse Road – E-2
Columbus, Ohio 43229-6693

March 2, 2026

Christian Cortez
Burns & McDonnell
530 West Spring Street, Suite 100
Columbus, Ohio 43215

Re: 26-0214_NCHP Phase 6 Pipeline System Replacement

Project: The proposed project involves the replacement of approximately 5.22 miles of 20-inch pipeline, a new station and several associated lateral connections.

Location: The proposed project is located in Perry and Sharon townships, Franklin County, Ohio.

Center Coordinates: (40.0625, -83.0071)

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

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

Yellow-crowned Night-heron (*Nyctanassa violacea*), SI
Elktoe (*Alasmidonta marginata*), SC
Eastern Ringtail (*Erpetogomphus designatus*), SC
Wavy-rayed Lampmussel (*Lampsilis fasciola*), SC
Round Pigtoe (*Pleurobema sintoxia*), SC
Kidneyshell (*Ptychobranchus fasciolaris*), SC

Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Features searched include locations of rare and endangered plants and

animals determined to be of value to the conservation of their species, high quality plant communities, animal breeding assemblages, and outstanding geological features.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

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

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

The project is within the vicinity of records for the little brown bat (*Myotis lucifugus*), a state endangered species. Because presence of state endangered bat species has been established in the area, summer tree clearing is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree clearing inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in clusters of dead leaves on tree limbs. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree and/or tree limb clearing only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with a Diameter Breast Height (DBH) ≥ 20" if possible.

For every project, the DOW also recommends that a winter bat habitat assessment is conducted to determine if potential hibernacula are present within the project area. This is to limit possible disturbances that seasonal tree clearing and/or subsurface work (e.g., trenching, blasting, etc.) may cause to hibernating bats. Potential hibernacula include rocky outcroppings, caves, and underground mines. Direction on how to conduct winter habitat assessments can be found in the joint guidance OHIO DIVISION OF WILDLIFE AND U.S. FISH AND WILDLIFE SERVICE (OH-FIELD OFFICE) JOINT GUIDANCE FOR BAT SURVEYS. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile permanent tree clearing buffer around the hibernaculum entrance. Limited summer or winter tree clearing may be acceptable after consultation with the DOW. If a habitat assessment for projects involving subsurface disturbance finds that a potential hibernaculum is present within 5 miles of the project area, please consult with Eileen Wyza for project recommendations. If no tree clearing or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed fish species.
State Endangered
goldeye (*Hiodon alosoides*)
shortnose gar (*Lepisosteus platostomus*)
Iowa darter (*Etheostoma exile*)

spotted darter (*Etheostoma maculatum*)
northern brook lamprey (*Ichthyomyzon fossor*)
tonguetied minnow (*Exoglossum laurae*)
popeye shiner (*Notropis ariommus*)

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

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

The project is within the range of the following listed mussel species.
Federally Endangered
clubshell (*Pleurobema clava*)
rayed bean (*Villosa fabalis*)
northern riffleshell (*Epioblasma torulosa rangiana*)
snuffbox (*Epioblasma triquetra*)
purple cat's paw (*Epioblasma obliquata*)

Federally Threatened
rabbitsfoot (*Theliderma cylindrica*)

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

State Threatened
pondhorn (*Uniomerus tetralasmus*)
Salamander Mussel (*Simpsonaias ambigua*)

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2025), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. If there is no in-water work proposed, impacts to mussels are not likely.

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

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

Water Resources: The Division of Water Resources has not conducted a project specific review and/or comments, however, the guidance provided below should be reviewed by the Environmental Review applicant for applicability on this project and subsequent compliance.

If the subject project is in a floodplain regulated by the Federal Emergency Management Agency (FEMA), the local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals. The FEMA National Flood Hazard Layer (NHFL) Viewer website can be utilized to see if the project is in a FEMA regulated floodplain. If the project is not in a FEMA regulated floodplain, then no further action is required.

Ohio Revised Code (ORC) Section 1521.16 mandates that any owner of a property or a facility that has the capacity of withdrawing 100,000 gallons per day (gpd) of water from groundwater, surface water, or both must register with the Division of Water Resources' Water Withdrawal Facilities Registration (WWFR) Program and report their withdrawals annually.

Additional coordination may be required depending on the location of the withdrawal and consumptive use. Restrictions or permitting may be required for:

- New or increased consumptive use of water averaging 2 million gallons per day (mgd) within 30 days within the Ohio River basin.
- New or increased withdrawal and consumptive water use in the Lake Erie watershed averaging 1 million gallons per day (mgd) or more in 90 days.
- New or increased water withdrawal directly from Lake Erie averaging 2.5 million gallons per day (mgd) or more in 90 days.
- Diversion or movement of water across the Ohio River and Lake Erie basin divide.

If the project does not involve activities that are subject to water withdrawal regulatory requirements as described above, then no further action is required. For more information, visit the Water Inventory & Planning website.

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

Expiration: *ODNR Environmental Reviews are typically valid for 2 years from the issuance date. If the scope of work, project area, construction limits, and/or anticipated impacts to natural resources have changed significantly from the original project submittal, then a new Environmental Review request should be submitted.*

2/3/2026

Attention: Mike Pettegrew
ODNR Office of Real Estate & Land Management
2045 Morse Road, Building E-2
Columbus, OH 43229

Via email: environmentalreviewrequest@dnr.state.oh.us

Re: Project Review Request
NCHP Phase 6 Pipeline System Replacement Project
Franklin County, Ohio

Dear Mr. Pettegrew,

NiSource is formally requesting an updated review from the Ohio Department of Natural Resources (ODNR) for the proposed North Columbus High Pressure Pipeline (NCHP) Phase 6 Pipeline System Replacement Project located in Franklin County, Ohio (Figure 1). The Project is within the City of Columbus and Perry and Sharon Townships. Phase 6 includes the replacement of approximately 5.22 miles of 20-inch pipeline, a new station and several associated lateral connections.

The Project was previously submitted for review to the ODNR on August 5, 2025. A letter response (Attachment 1) received on September 2, 2025 (Re: 25-1167_NCHP Phase 6) recommended impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, along with no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. The ODNR also recommended tree clearing to only occur from October 1 through March 31, along with a winter bat habitat assessment to be conducted to determine if potential hibernacula are present. On July 31, 2025, a reconnaissance survey for unionid mussels conducted along the Olentangy River determined no living or freshly dead mussels present within the Project area. Furthermore, with horizontal directional drilling (HDD) proposed to cross the Olentangy River, impacts to the stream are not anticipated.

The Project has been updated with a new location for the proposed station, now situated within the property of the Ohio School for the Deaf. This location is marked with a green boundary on Figure 1.

Please provide us with the results of an updated environmental review from the ODNR, including results of the ODNR Natural Heritage Database search, at your earliest convenience. For ease of review, we have included a project location map (Figure 1), shapefiles of the project Survey Area, the previous ODNR letter (Attachment 1), and Franklin County state species list (Attachment 2).

If you have questions or need additional information regarding the Project, please contact me at the phone number or email below. Thank you for your assistance with this request.

Sincerely,

Brooke Harrison
Project Manager
bharrison@burnsmcd.com
(380) 390-2516

Burns & McDonnell
Attn. Brooke Harrison
530 West Spring Street, Suite 100
Columbus, OH 43215

Cc:
Christian Cortez, Burns & McDonnell

FIGURE 1 – SITE LOCATION MAP

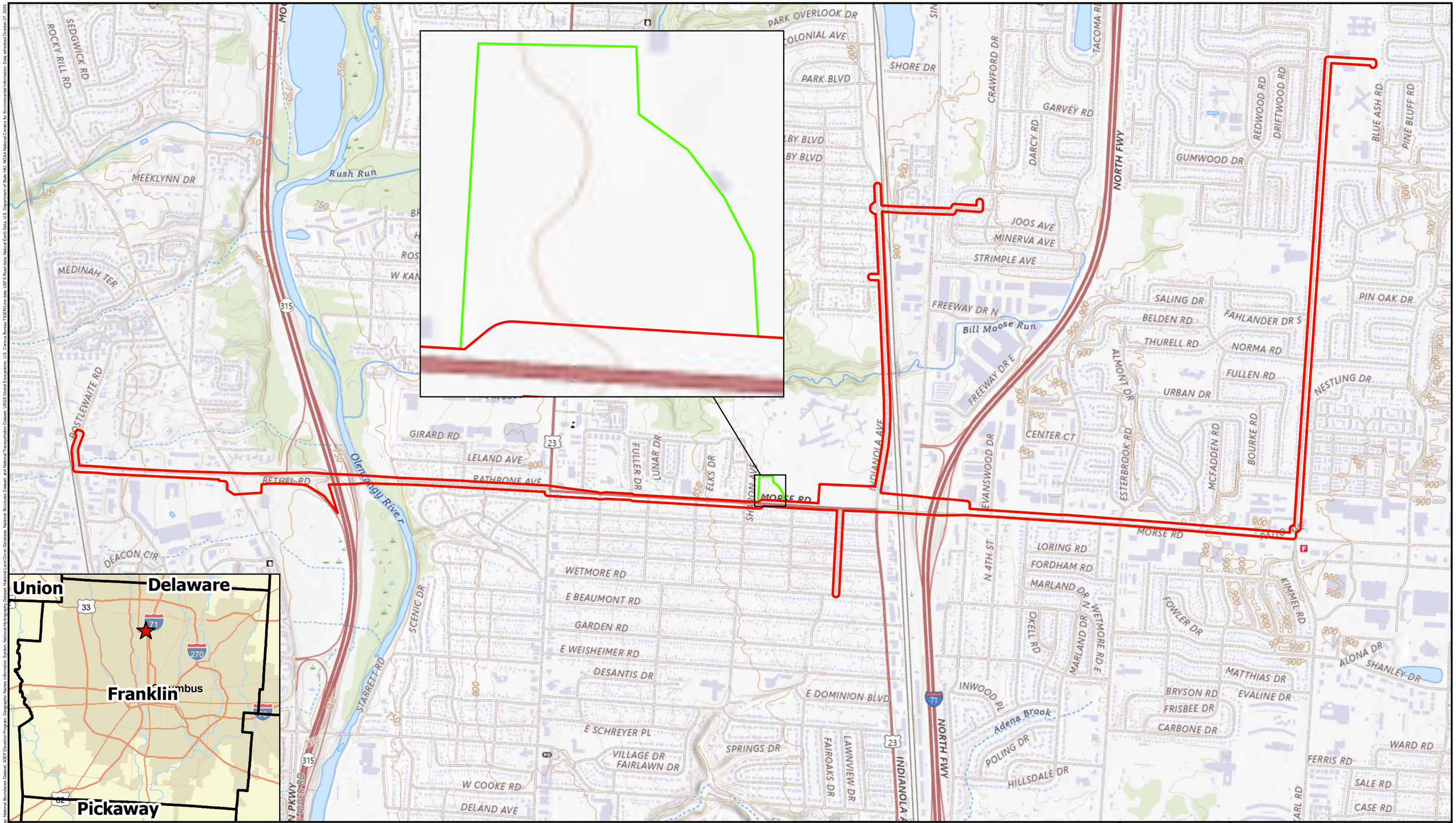


Figure 1: Vicinity Map
NCHP Phase 6 Pipeline System Replacement Project
NiSource
Franklin County, OH

Issued: 1/23/2026

Source: NiSource, Burns & McDonnell, USGS, and ESRI.

Service Layer Credits: USGS Topo: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State INT; NOAA National Centers for Environmental Information. Data refreshed October 27, 2025.

ATTACHMENT 1 – PREVIOUS ODNR LETTER

Department of Natural Resources
ohiodnr.gov

Mike DeWine, *Governor*
Jim Tressel, *Lt. Governor*
Mary Mertz, *Director*

Office of Real Estate & Land Management
Tara Paciorek - Chief
2045 Morse Road – E-2
Columbus, Ohio 43229-6693

September 2, 2025

Antonio Hornstein
Burns & McDonnell
530 West Spring Street, Suite 200
Columbus, Ohio 43215

Re: 25-1167_NCHP Phase 6

Project: The proposed project involves the replacement of approximately 5.22 miles of 20-inch pipeline, a new station and several associated lateral connections.

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

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

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

Yellow-crowned Night-heron (*Nyctanassa violacea*), SI
Elktoe (*Alasmidonta marginata*), SC
Eastern Ringtail (*Erpetogomphus designatus*), SC
Wavy-rayed Lampmussel (*Lampsilis fasciola*), SC
Round Pigtoe (*Pleurobema sintoxia*), SC
Kidneyshell (*Ptychobranchus fasciolaris*), SC

Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Features searched include locations of rare and endangered plants and animals determined to be of value to the conservation of their species, high quality plant communities, animal breeding assemblages, and outstanding geological features.

Of the species listed above, Yellow-crowned Night-heron is not recorded within the boundaries of the specified project area. Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

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

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

The project is within the vicinity of records for the little brown bat (*Myotis lucifugus*), a state endangered species. Because presence of state endangered bat species has been established in the area, summer tree clearing is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree clearing inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in clusters of dead leaves on tree limbs. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree and/or tree limb clearing only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with a Diameter Breast Height (DBH) ≥ 20" if possible.

For every project, the DOW also recommends that a winter bat habitat assessment is conducted to determine if potential hibernacula are present within the project area. This is to limit possible disturbances that seasonal tree clearing and/or subsurface work (e.g., trenching, blasting, etc.) may cause to hibernating bats. Potential hibernacula include rocky outcroppings, caves, and underground mines. Direction on how to conduct winter habitat assessments can be found in the joint guidance OHIO DIVISION OF WILDLIFE AND U.S. FISH AND WILDLIFE SERVICE (OH-FIELD OFFICE) JOINT GUIDANCE FOR BAT SURVEYS. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile permanent tree clearing buffer around the hibernaculum entrance. Limited summer or winter tree clearing may be acceptable after consultation with the DOW. If a habitat assessment for projects involving subsurface disturbance finds that a potential hibernaculum is present within 5 miles of the project area, please consult with Eileen Wyza for project recommendations. If no tree clearing or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species.
Federally Endangered
clubshell (*Pleurobema clava*)
rayed bean (*Villosa fabalis*)
northern riffleshell (*Epioblasma torulosa rangiana*)
snuffbox (*Epioblasma triquetra*)
purple cat's paw (*Epioblasma obliquata*)

Federally Threatened
rabbitsfoot (*Theliderma cylindrica*)

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

State Threatened
pondhorn (*Uniomerus tetralasmus*)
Salamander Mussel (*Simpsonaias ambigua*)

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2025), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. If there is no in-water work proposed, impacts to mussels are not likely.

The project is within the range of the following listed fish species.
State Endangered
goldeye (*Hiodon alosoides*)
shortnose gar (*Lepisosteus platostomus*)
Iowa darter (*Etheostoma exile*)
spotted darter (*Etheostoma maculatum*)
northern brook lamprey (*Ichthyomyzon fossor*)
tonguetied minnow (*Exoglossum laurae*)
popeye shiner (*Notropis ariommus*)

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

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

The project is within the range of the sandhill crane (*Antigone canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds, they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

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

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

Water Resources: The Division of Water Resources has not conducted a project specific review and/or comments, however, the guidance provided below should be reviewed by the Environmental Review applicant for applicability on this project and subsequent compliance.

If the subject project is in a floodplain regulated by the Federal Emergency Management Agency (FEMA), the local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals. The FEMA National Flood Hazard Layer (NHFL) Viewer website can be utilized to see if the project is in a FEMA regulated floodplain. If the project is not in a FEMA regulated floodplain, then no further action is required.

Ohio Revised Code (ORC) Section 1521.16 mandates that any owner of a property or a facility that has the capacity of withdrawing 100,000 gallons per day (gpd) of water from groundwater, surface water, or both must register with the Division of Water Resources' Water Withdrawal Facilities Registration (WWFR) Program and report their withdrawals annually.

Additional coordination may be required depending on the location of the withdrawal and consumptive use. Restrictions or permitting may be required for:

- New or increased consumptive use of water averaging 2 million gallons per day (mgd) within 30 days within the Ohio River basin.
- New or increased withdrawal and consumptive water use in the Lake Erie watershed averaging 1 million gallons per day (mgd) or more in 90 days.
- New or increased water withdrawal directly from Lake Erie averaging 2.5 million gallons per day (mgd) or more in 90 days.
- Diversion or movement of water across the Ohio River and Lake Erie basin divide.

If the project does not involve activities that are subject to water withdrawal regulatory requirements as described above, then no further action is required. For more information, visit the Water Inventory & Planning website.

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

Expiration: *ODNR Environmental Reviews are typically valid for 2 years from the issuance date. If the scope of work, project area, construction limits, and/or anticipated impacts to natural resources have changed significantly from the original project submittal, then a new Environmental Review request should be submitted.*

ATTACHMENT 2 – ODNR COUNTY STATE SPECIES LISTS

Franklin County State Listed Animal Species

Common Name	Scientific Name	Group	State Status	Federal Status
Blanchard's Cricket Frog	*Acris blanchardi*	Amphibian	Species of Concern	
Green-winged Teal	*Anas crecca*	Bird	Special Interest	
Sandhill Crane	*Antigone canadensis*	Bird	Threatened	
Great Egret	*Ardea alba*	Bird	Species of Concern	
Upland Sandpiper	*Bartramia longicauda*	Bird	Endangered	
American Bittern	*Botaurus lentiginosus*	Bird	Endangered	
Lark Sparrow	*Chondestes grammacus*	Bird	Endangered	
Least Bittern	*Ixobrychus exilis*	Bird	Threatened	
Yellow-crowned Night-heron	*Nyctanassa violacea*	Bird	Special Interest	
Prothonotary Warbler	*Protonotaria citrea*	Bird	Species of Concern	
Barn Owl	*Tyto alba*	Bird	Threatened	
Golden-winged Warbler	*Vermivora chrysoptera*	Bird	Special Interest	
Lyre-tipped Spreadwing	*Lestes unguiculatus*	Damselfly	Species of Concern	
Eastern Ringtail	*Erpetogomphus designatus*	Dragonfly	Species of Concern	

Data from the Ohio Natural Heritage Database

Species reported extant in county since 1980

6/23/2023

Absence of a species on this list does not indicate absence from the county. The information contained in this list does not represent coordination with ODNR or fulfill NEPA or other federal/state requirements. All federally and/or state listed bat species have ranges that encompass the entire state and are not included on county lists. For further information on current listed species, please use the following link:

State Listed Species | Ohio Department of Natural Resources (ohiodnr.gov)

Common Name	Scientific Name	Group	State Status	Federal Status
Stygian Shadowdragon	*Neurocordulia yamaskanensis*	Dragonfly	Endangered	
Lake Chubsucker	*Erimyzon sucetta*	Fish	Threatened	
Muskellunge	*Esox masquinongy*	Fish	Species of Concern	
Iowa Darter	*Etheostoma exile*	Fish	Endangered	
Spotted Darter	*Etheostoma maculatum*	Fish	Endangered	
Tippecanoe Darter	*Etheostoma tippecanoe*	Fish	Species of Concern	
Shortnose Gar	*Lepisosteus platostomus*	Fish	Endangered	
Blacknose Shiner	*Notropis heterolepis*	Fish	Endangered	
Paddlefish	*Polyodon spathula*	Fish	Threatened	
Deer Mouse	*Peromyscus maniculatus*	Mammal	Species of Concern	
American Badger	*Taxidea taxus*	Mammal	Species of Concern	
Elktoe	*Alasmidonta marginata*	Mollusk	Species of Concern	
Slippershell Mussel	*Alasmidonta viridis*	Mollusk	Threatened	
Purple Wartyback	*Cyclonaias tuberculata*	Mollusk	Species of Concern	
Elephant-ear	*Elliptio crassidens*	Mollusk	Endangered	
Northern Riffleshell	*Epioblasma rangiana*	Mollusk	Endangered	Endangered

Data from the Ohio Natural Heritage Database

Species reported extant in county since 1980

6/23/2023

Absence of a species on this list does not indicate absence from the county. The information contained in this list does not represent coordination with ODNR or fulfill NEPA or other federal/state requirements. All federally and/or state listed bat species have ranges that encompass the entire state and are not included on county lists. For further information on current listed species, please use the following link:

State Listed Species | Ohio Department of Natural Resources (ohiodnr.gov)

Common Name	Scientific Name	Group	State Status	Federal Status
Snuffbox	*Epioblasma triquetra*	Mollusk	Endangered	Endangered
Wavy-rayed Lampmussel	*Lampsilis fasciola*	Mollusk	Species of Concern	
Pocketbook	*Lampsilis ovata*	Mollusk	Endangered	
Creek Heelsplitter	*Lasmigona compressa*	Mollusk	Species of Concern	
Black Sandshell	*Ligumia recta*	Mollusk	Species of Concern	
Washboard	*Megalonaias nervosa*	Mollusk	Endangered	
Threehorn Wartyback	*Obliquaria reflexa*	Mollusk	Species of Concern	
Round Hickorynut	*Obovaria subrotunda*	Mollusk	Threatened	
Clubshell	*Pleurobema clava*	Mollusk	Endangered	Endangered
Round Pigtoe	*Pleurobema sintoxia*	Mollusk	Species of Concern	
Kidneyshell	*Ptychobranchus fasciolaris*	Mollusk	Species of Concern	
Salamander Mussel	*Simpsonaias ambigua*	Mollusk	Threatened	
Rabbitsfoot	*Theliderma cylindrica*	Mollusk	Endangered	Threatened
Fawnsfoot	*Truncilla donaciformis*	Mollusk	Species of Concern	
Deertoe	*Truncilla truncata*	Mollusk	Species of Concern	
Pondhorn	*Uniomerus tetralasmus*	Mollusk	Threatened	

Data from the Ohio Natural Heritage Database

Species reported extant in county since 1980

6/23/2023

Absence of a species on this list does not indicate absence from the county. The information contained in this list does not represent coordination with ODNR or fulfill NEPA or other federal/state requirements. All federally and/or state listed bat species have ranges that encompass the entire state and are not included on county lists. For further information on current listed species, please use the following link:

State Listed Species | Ohio Department of Natural Resources (ohiodnr.gov)

Common Name	Scientific Name	Group	State Status	Federal Status
Rayed Bean	*Villosa fabalis*	Mollusk	Endangered	Endangered
Rainbow	*Villosa iris*	Mollusk	Species of Concern	
Smooth Greensnake	*Opheodrys vernalis*	Reptile	Endangered	
Queensnake	*Regina septemvittata*	Reptile	Species of Concern	

Data from the Ohio Natural Heritage Database

Species reported extant in county since 1980

6/23/2023

Absence of a species on this list does not indicate absence from the county. The information contained in this list does not represent coordination with ODNR or fulfill NEPA or other federal/state requirements. All federally and/or state listed bat species have ranges that encompass the entire state and are not included on county lists. For further information on current listed species, please use the following link:

State Listed Species | Ohio Department of Natural Resources (ohiodnr.gov)

Franklin County State Listed Plant Species

Common name	Scientific name	Last Observed	Category	State Status	Federal Status
American Sweet-flag	*Acorus americanus*	1989	Vascular Plant	P	
Gattinger's-foxglove	*Agalinis gattingeri*	2017	Vascular Plant	T	
Spreading Rock Cress	*Arabis patens*	2022	Vascular Plant	E	
Southern Hairy Rock Cress	*Arabis pycnocarpa* var. *adpressipilis*	2023	Vascular Plant	P	
Prairie False Indigo	*Baptisia lactea*	2017	Vascular Plant	P	
Prairie Brome	*Bromus kalmii*	2019	Vascular Plant	P	
Cypress-knee Sedge	*Carex decomposita*	2006	Vascular Plant	E	
Tall Larkspur	*Delphinium exaltatum*	2008	Vascular Plant	P	
Scaly Blazing-star	*Liatris squarrosa*	2019	Vascular Plant	P	
Showy Goldenrod	*Solidago speciosa*	2019	Vascular Plant	T	
Arbor Vitae	*Thuja occidentalis*	2001	Vascular Plant	P	
Three-birds Orchid	*Triphora trianthophoros*	1981	Vascular Plant	P	
Rock Elm	*Ulmus thomasii*	2010	Vascular Plant	P	

Data source: Ohio Natural Heritage Database
Species reported extant in county since 1980
Date accessed: 2/6/2025

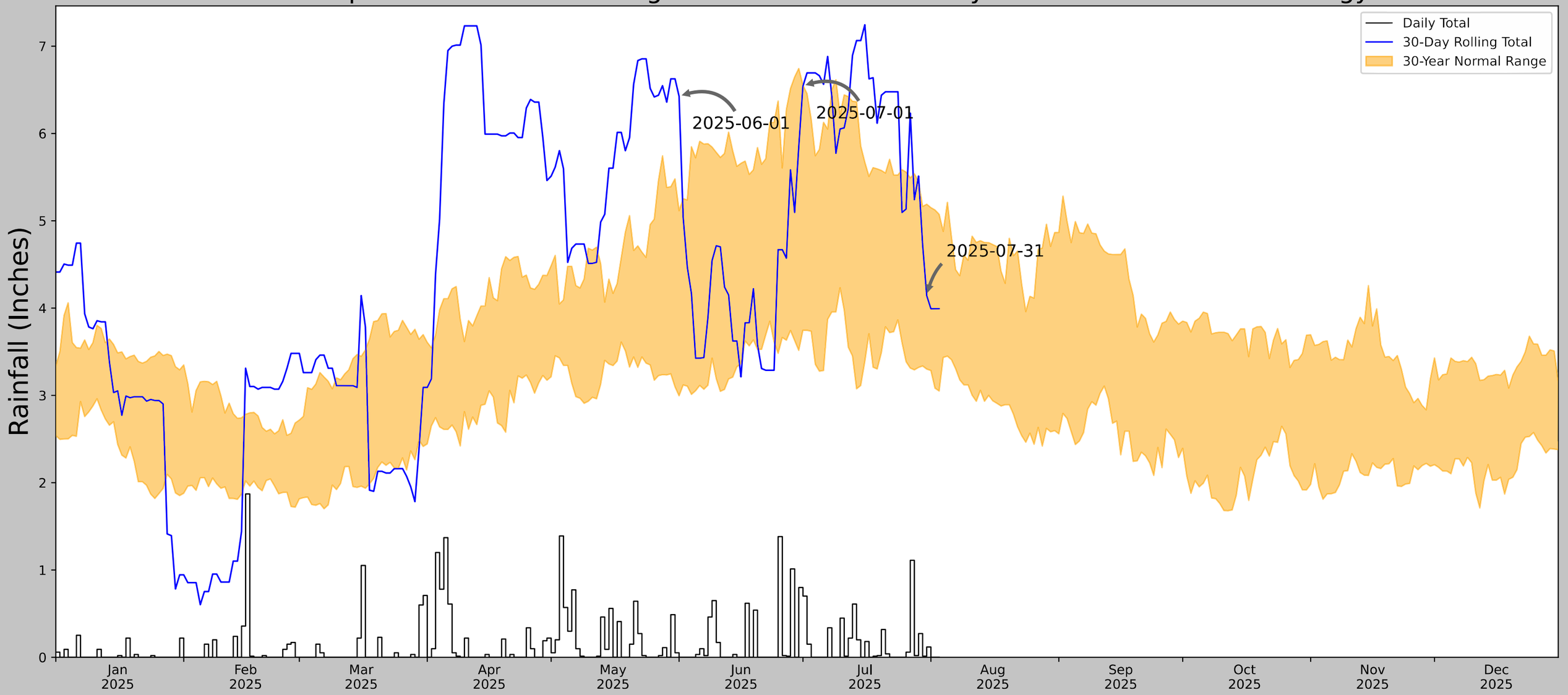
State Status:
E = Endangered
T = Threatened
X = Extirpated
P = Potentially Threatened
U = Status Under Review

Federal Status:
FE = Federally Endangered
FT = Federally Threatened

Absence of a species on this list does not indicate absence from the county. The information contained in this list does not represent coordination with ODNR or fulfill NEPA or other federal/state requirements.

Appendix G – Antecedent Precipitation Tool

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	40.06761, -83.00732
Observation Date	2025-07-31
Elevation (ft)	838.311
Drought Index (PDSI)	Incipient drought (2025-06)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-07-31	3.300394	5.188189	4.141732	Normal	2	3	6
2025-07-01	3.744488	6.554331	6.543307	Normal	2	2	4
2025-06-01	2.994488	5.115354	6.425197	Wet	3	1	3
Result							Normal Conditions - 13

Figures and tables made by the Antecedent Precipitation Tool Version 3.0

US Army Corps of Engineers.
ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WESTERVILLE	40.1267, -82.9442	801.837	5.272	36.474	2.565	11342	90
WESTERVILLE 0.2 WNW	40.1226, -82.9213	886.155	1.243	84.318	0.664	1	0
WESTERVILLE 4.0 N	40.179, -82.9256	900.919	3.745	99.082	2.056	1	0
COLUMBUS-HAP CREMEAN WP	40.0603, -82.8942	831.037	5.295	29.2	2.537	9	0


BURNS
McDONNELL

F.2 CULTURAL INFORMATION

February 3, 2026

Steven M. Biehl
Project Reviews Manager - Archaeology
Ohio Historic Preservation Office
800 E. 17th Ave
Columbus, OH 43211-2474

Re: NiSource NCHP Pipeline System Replacement, Phase 6 Project Introduction and Desktop Review, 2025-FRA-65961

Dear Mr. Biehl:

On July 18, 2025, a Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) archaeologist retrieved data from the Ohio State Historic Preservation Office (SHPO) Online Mapping System (OMS) for the NiSource North Columbus High Pressure (NCHP) Phase 6 Pipeline System Replacement Project (Project). A desktop review was previously submitted and a response received. However, a change to the Project has led to this update and resubmittal.

The Project includes the replacement of approximately 5.22 miles of 20-inch gas pipeline in Franklin County (Figure 1). Several lateral lines and one station are associated with this Project. The proposed station location has moved onto the School for the Deaf Property, and therefore the Project area has expanded. The new proposed station location footprint is shown on Figure 1. The Project will mainly be constructed within public road right-of-way and private permanent pipeline easements. Conventional boring, horizontal directional drilling, and open cut installation methods will be utilized. NiSource is required to submit a standard application to the Ohio Power Siting Board (OPSB) for the Project. OPSB regulations require NiSource to consult with the Ohio SHPO regarding cultural resources.

The objective of this cultural resources background review was to research what cultural resources exist in the vicinity of the Project and evaluate whether the Project would be likely to impact any significant resources. To assist in determining the possible impacts, the review included a 1-mile radius around the Project, hereafter referred to as the Study Area.

Desktop Review Results

The data from OMS revealed that there are 13 archaeological sites, 264 above-ground historic resources, 7 cemeteries, 4 National Register of Historic Places (NRHP) listings, and 3 NRHP districts in the Study Area (Figures 2 and 3). One NRHP district is mapped overlapping the Project, and a cemetery and two historic resources are adjacent. Additionally, five previous cultural resources surveys have been completed in the Study Area, two of which cross the current Project (Figure 2).

All of the archaeological sites are prehistoric in age, and one is a mound that is listed on the NRHP (Table 1). The remaining sites are unevaluated for NRHP potential. One site, 33FR9999, is a preliminary site with limited information; it is likely that the site number is a temporary placeholder.

Table 1: Previously Identified Archaeological Sites in the Study Area

Site Number	Age	Site Type	NRHP Status
33FR0012	Early Woodland	Mound group, geometric earthworks	Unevaluated
33FR0017	Woodland	Earthen mound	Listed
33FR0018	Woodland	Unknown mound	Unevaluated
33FR0054	Woodland	Unknown mound	Unevaluated
33FR0055	Unassigned prehistoric	Unknown	Unevaluated
33FR0084	Early Woodland	Unknown	Unevaluated

Site Number	Age	Site Type	NRHP Status
33FR0085	Unassigned prehistoric	Unknown	Unevaluated
33FR0090	Unassigned prehistoric	Unknown	Unevaluated
33FR0441	Unassigned prehistoric	Unknown	Unevaluated
33FR0442	Unassigned prehistoric	Unknown	Unevaluated
33FR0477	Late Archaic, Early Woodland	Unknown	Unevaluated
33FR0480	Early Archaic, Late Archaic, Early Woodland	Unknown	Unevaluated
33FR9999	Unassigned prehistoric	Unknown	Unevaluated

The historic resources include residences, churches, schools, commercial buildings, bridges, a dam, and a fire station (Table 2). There are 132 recorded resources within the NRHP districts. Those are not included in the table below or on the figures. Only the 132 outside of those districts are discussed individually. None of the resources are within the Project's boundary, but two are adjacent (Figure 3). One resource has been determined to be eligible for the NRHP, but no site form is available, and information is limited. None of the other resources have been evaluated.

Table 2: Previously Identified Historic Resources in the Study Area

Resource Number	Name	Year Constructed	NRHP Status
Unknown	Commercial building	Unknown	Eligible
FRA0185610	Maple Grove United Methodist	1941	Unevaluated
FRA0185710	Weisheimer House	1897	Unevaluated
FRA0185810	Haverson House	1925	Unevaluated
FRA0185910	Bogatay/Hall House	1905	Unevaluated
FRA0186010	Urban House	1920	Unevaluated
FRA0186503	Baker House	1920	Unevaluated
FRA0186603	Borer House	1940	Unevaluated
FRA0186703	Taylor House	1944	Unevaluated
FRA0186802	McFadden House	1930	Unevaluated
FRA0187002	Coe/Jewett House	1815	Unevaluated
FRA0187102	Corbett House	1900	Unevaluated
FRA0187402	Burson House	1835	Unevaluated
FRA0187502	Lalendorf/Snedden House	1860	Unevaluated
FRA0190702	Jewett House	1880	Unevaluated
FRA0190802	Bethel Methodist Church	1845	Unevaluated
FRA0210003	Conklin House	1860	Unevaluated
FRA0211503	Chase House	1815	Unevaluated
FRA0211603	Scott House	1860	Unevaluated
FRA0212203	Robinson House	1909	Unevaluated
FRA0212603	Joyce House	1900	Unevaluated
FRA0214903	Butler House	1875	Unevaluated
FRA0216203	Wright House	1835	Unevaluated
FRA0216403	Sprout House	1874	Unevaluated
FRA0216903	Russell House	1845	Unevaluated
FRA0535303	Commercial building	1950	Unevaluated

Resource Number	Name	Year Constructed	NRHP Status
FRA0701803	Sharon Elementary School	1947	Unevaluated
FRA0712210	Indian Springs Elementary School	1950	Unevaluated
FRA0936503	SR 161 Ohio Railway Museum Bridge	1960	Unevaluated
FRA0936603	SR 161 Norfolk Southern Rail Bridge	1940	Unevaluated
FRA0936703	SR 161 CSX Railroad Bridge	1940	Unevaluated
FRA1010802	Broadmeadows Dam	1960	Unevaluated
FRA1011803	Capri Lanes	1965	Unevaluated
FRA1011903	Ohio National Bank Branch	1966	Unevaluated
FRA1012011	Lutheran Ascension Church	1963	Unevaluated
FRA1015411	Maize Road Baptist Church	1969	Unevaluated
FRA1015511	Columbus Fire Station 24	1960	Unevaluated
FRA1015611	City National Bank	1964	Unevaluated
FRA1015703	Buckeye Federal Savings & Loans	1965	Unevaluated
FRA1015811	Masters House	1956	Unevaluated
FRA1015911	Benvenuti House	1957	Unevaluated
FRA1016111	VanFossen House	1957	Unevaluated
FRA1016211	Young House	1958	Unevaluated
FRA1016311	Rector House	1957	Unevaluated
FRA1016411	Palmer House	1959	Unevaluated
FRA1016511	Susi Lucian House	1957	Unevaluated
FRA1016611	Sharp House	1956	Unevaluated
FRA1016711	Damron House	1955	Unevaluated
FRA1016811	Abele House	1954	Unevaluated
FRA1016911	Rippel House	1960	Unevaluated
FRA1017711	Cooke Recreation Center	1955	Unevaluated
FRA1018111	Voll House	1956	Unevaluated
FRA1018211	Thompson House	1959	Unevaluated
FRA1018311	Balthaser House	1959	Unevaluated
FRA1018411	Tuttle House	1959	Unevaluated
FRA1018511	Hennerley House	1959	Unevaluated
FRA1018611	Butts House	1959	Unevaluated
FRA1018711	Schillinger House	1959	Unevaluated
FRA1018811	Blateau House	1957	Unevaluated
FRA1018911	Shivener House	1959	Unevaluated
FRA1019011	Frasher House	1957	Unevaluated
FRA1019111	Breiner House	1957	Unevaluated
FRA1019211	Houston House	1957	Unevaluated
FRA1019311	Brush House	1957	Unevaluated
FRA1019411	Raynard House	1959	Unevaluated
FRA1019511	Hanlin House	1959	Unevaluated
FRA1019711	May House	1959	Unevaluated
FRA1019811	Moxley House	1959	Unevaluated
FRA1019911	Zwick House	1962	Unevaluated

Resource Number	Name	Year Constructed	NRHP Status
FRA1020011	Holl House	1961	Unevaluated
FRA1020111	Natoli House	1962	Unevaluated
FRA1020211	Rohr House	1959	Unevaluated
FRA1020311	Campbell House	1960	Unevaluated
FRA1020411	Bossman Duplex	1962	Unevaluated
FRA1020511	Double Ranch	1965	Unevaluated
FRA1020611	Double Ranch	1959	Unevaluated
FRA1020711	Mrs Hyde House	1960	Unevaluated
FRA1020811	McDaniel House	1962	Unevaluated
FRA1020911	Wilson House	1959	Unevaluated
FRA1021011	Raiser House	1959	Unevaluated
FRA1021111	Jenkins House	1958	Unevaluated
FRA1021211	Baca House	1965	Unevaluated
FRA1021311	Janes House	1965	Unevaluated
FRA1021411	Laeselle House	1962	Unevaluated
FRA1021511	Clinton Middle School	1959	Unevaluated
FRA1021711	Bauchert House	1965	Unevaluated
FRA1021811	Burl House	1960	Unevaluated
FRA1021911	Pearson House	1959	Unevaluated
FRA1022011	Grohoske House	1959	Unevaluated
FRA1022111	Cavote House	1959	Unevaluated
FRA1022211	Dane Stephens House	1959	Unevaluated
FRA1022311	Williams House	1959	Unevaluated
FRA1022411	Taylor House	1961	Unevaluated
FRA1022511	Hutchins House	1957	Unevaluated
FRA1022611	Gibson House	1960	Unevaluated
FRA1022711	Hays House	1957	Unevaluated
FRA1022811	Bennett House	1959	Unevaluated
FRA1022911	Graham House	1959	Unevaluated
FRA1023011	Parlette & Dotson House	1959	Unevaluated
FRA1023111	Tiano House	1959	Unevaluated
FRA1023211	Reed House	1959	Unevaluated
FRA1023411	Otto Lewis House	1964	Unevaluated
FRA1023511	Mrs. Mitton House	1954	Unevaluated
FRA1023911	Cautela House	1962	Unevaluated
FRA1024011	Leonard House	1961	Unevaluated
FRA1024111	Turney House	1958	Unevaluated
FRA1024211	Bruce House	1959	Unevaluated
FRA1024311	Croce House	1960	Unevaluated
FRA1024411	Hollern House	1962	Unevaluated
FRA1024511	DeCiccio House	1962	Unevaluated
FRA1024611	Bolin House	1961	Unevaluated
FRA1024711	Petry House	1960	Unevaluated

Resource Number	Name	Year Constructed	NRHP Status
FRA1024911	Meyers House	1963	Unevaluated
FRA1025011	Paul House	1957	Unevaluated
FRA1025111	McLean House	1959	Unevaluated
FRA1025211	Crouch House	1959	Unevaluated
FRA1025311	Pollock House	1960	Unevaluated
FRA1025411	Trinity Church House	1962	Unevaluated
FRA1025511	Kinkead House	1953	Unevaluated
FRA1027111	Robert & Evelyn Palmer House	1959	Unevaluated
FRA1027211	Mitchell & Elizabeth McMillan House	1958	Unevaluated
FRA1027311	John & Ruby Vrancken House	1959	Unevaluated
FRA1027411	Decker House; Egger-Taylor House	1959	Unevaluated
FRA1027511	Williamson House; Yee House	1960	Unevaluated
FRA1029911	William & Dossous House	1959	Unevaluated
FRA1030011	Tecklenberg House	1959	Unevaluated
FRA1033303	Fire Station #6	1970	Unevaluated
FRA1044803	Parkmoor School	1966	Unevaluated
FRA1044903	Valley Forge School	1963	Unevaluated
FRA1045010	Colerain School	1956	Unevaluated
FRA1045110	Glenmont School	1956	Unevaluated
FRA1045411	Maize Road School	1960	Unevaluated

Of the seven cemeteries that have been recorded in the Study Area, one is nearly adjacent to the Project (Figure 3). The Wyandotte Cemetery is mapped only 55 feet north of the Project. However, records with the Ohio Genealogical Society indicate the cemetery has been moved and is no longer present in that location (Ohio Genealogical Society 2025).

The NRHP listings include a mound, two residences, a railway car, and three districts (Figure 3). The Coe Mound (33FR0017) was added to the NRHP in 1974. The Mark Russell House, built in 1850, was listed in 1976, while the Charles Moore House, built in 1818, was listed in 1980. The Niles Car & Manufacturing Company Electric Railway Interurban Combine No. 21 was constructed in 1905 and listed in 1987. The Old Beechwold Historic District is an early 20th century planned community that was added to the NRHP in 1987 (Hagerling 1984). The Worthington Historic District includes the original planned village of Worthington, which was platted in 1802 before the settlers left New England to settle in Ohio. It was based on typical New England towns. The District was listed in 2010 (Ventresca 2008). The Rush Creek Village Historic District is a post-World War II residential neighborhood; its design is based on the work of Frank Lloyd Wright. It was added to the NRHP in 2003 (Brown et al. 2002).

The previous cultural resources projects were undertaken for road projects, a housing project, and cell towers (Table 3). Survey 11003, completed in 1976, and survey 11014, completed in 1981, cross the Project (Figure 2). As those surveys were completed prior to the adoption of the most recent archaeological survey standards, it is possible that those portions of the project would not be considered previously surveyed.

Table 3: Previous Cultural Resources Surveys in the Study Area

Survey Number	Title	Author(s)	Year
11003	Archaeological Survey of Proposed Interstate 315 - (Columbus & Worthington) Franklin County, Ohio	James E. Addington	1976
11014	Preliminary Archaeological Survey of the Proposed Northfield Village Housing Development in Columbus, (City of Columbus) Franklin County, Ohio	Julie Kime	1981
14536	Phase I Cultural Resource Survey for the Proposed FRA/DEL-IR 71-25.60 [PID 7278] Additional Median Through-Lane in the City of Columbus, Franklin County, and Orange, Genoa, and Berkshire Townships, Delaware County, Ohio	Bruce W. Aument	1999
19333	Phase I Archaeological Survey for the Woodward CLMB201 Wireless Cellular Tower in the City of Columbus, Franklin County, Ohio	Joel Brown	2014
21396	Phae I Cultural Resource Management Survey of a Proposed Vertical Bridge Cell Tower (US-OH-5173/St. Francis DeSales HS) in the City of Columbus, Franklin County, Ohio	Craig S. Keener and Stephen Gordon	2019

Project Area History and Land Use

The Project Area is largely comprised of roads and road rights-of-way along Karl Road, Morse Road, and Indianola Avenue (Figure 4). It is within commercial and residential areas with modern infrastructure such as roads and utilities. A review of historic era maps (historic atlases and topographic maps from 1872, 1901, 1902, 1954, 1955, 1964, and 1965) and aerial images (1953, 1957, 1963, 1971, 1980, 1985, 1994, and 2002) indicate the roads in the Project Area have changed little over the last 100 years (Caldwell and Gould 1872; USGS 1901, 1902, 1954, 1955, 1964, 1965; NETROnline 2025). However, extensive commercial and residential development has occurred throughout the 20th century.

Archaeological Site Potential

Although a portion of the Project has been previously surveyed, the previous surveys may not meet current standards. Thirteen archaeological sites, 264 historic resources, 7 cemeteries, 4 NRHP properties, and 3 NRHP districts are in the Study Area. One of the NRHP districts slightly overlaps the Project. Additionally, one cemetery is mapped within 55 feet of the Project, but it has reportedly been moved. A separate submission detailed a geophysical survey of the area. The Project is mainly within road right-of-way in a highly developed area, and it is likely that most of the Project is disturbed, making the potential for intact archaeological resources low. However, construction monitoring in the area of the cemetery will occur based on the results of the geophysical survey.

Please review the attached information and provide your opinion as to whether further cultural resources investigations are necessary for the Project. If you have any questions or require any additional information, please contact me at 614-565-4736 or khouse@burnsmcd.com.

Sincerely,

Kimberly House

Kimberly House
Senior Cultural Resources Specialist

cc: Janine White, NiSource
Michael Uloko, NiSource
Eve Kelly, NiSource
Scott Brown, NiSource
Gregory Peck, Burns & McDonnell
Brooke Harrison, Burns & McDonnell
Josh Fuelling, Burns & McDonnell
James Culbertson, Burns & McDonnell

References

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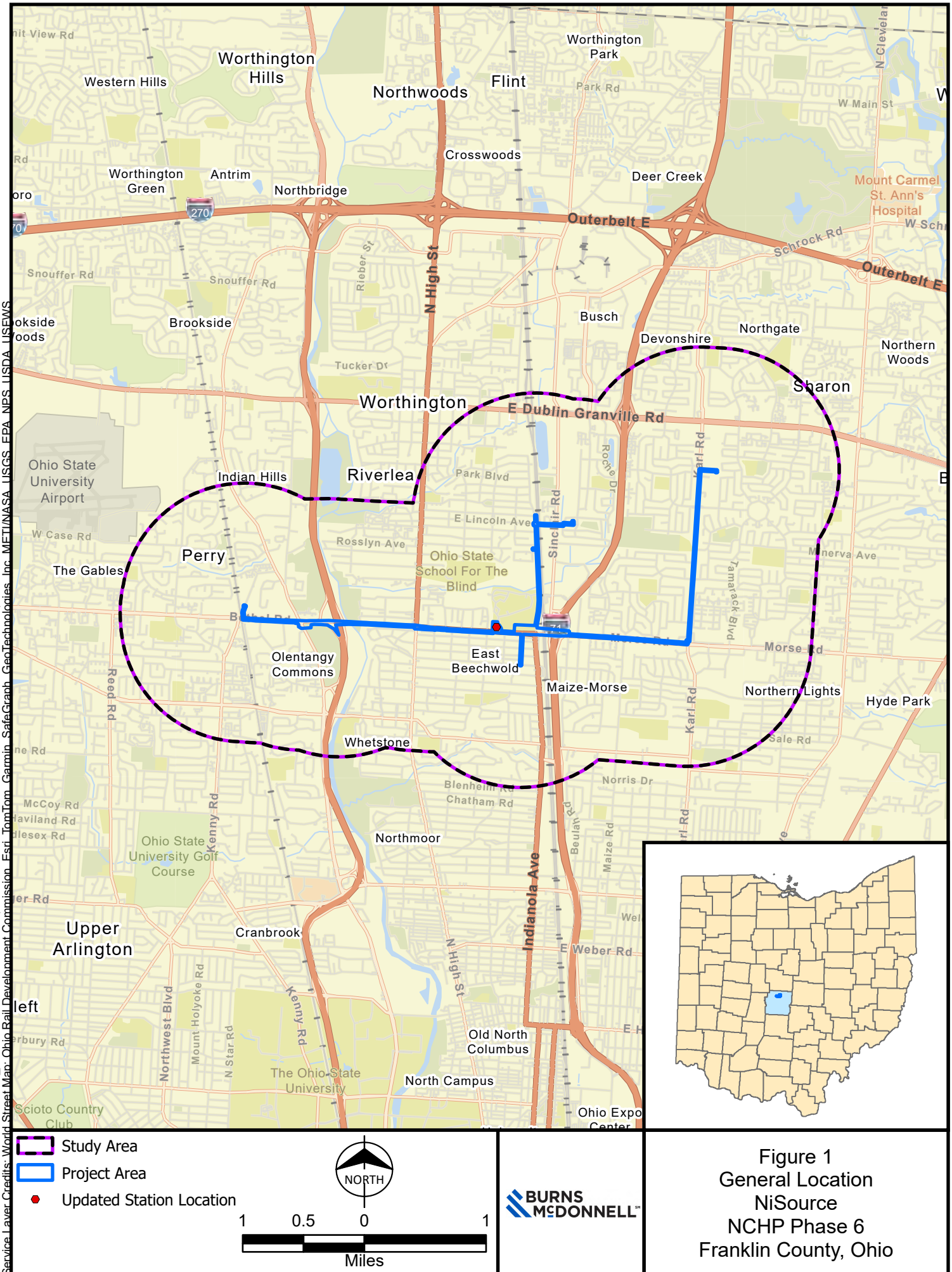
1902. *Westerville, Ohio*. 1:62,500 topographic map. Reston, VA.
1954. *Northeast Columbus, Ohio*. 1:24,000 topographic map. Reston, VA.
1955. *Northwest Columbus, Ohio*. 1:24,000 topographic map. Reston, VA.
1964. *Northeast Columbus, Ohio*. 1:24,000 topographic map. Reston, VA.
1965. *Northwest Columbus, Ohio*. 1:24,000 topographic map. Reston, VA.

Ventresca, Jim. 2008. *Worthington Historic District*. National Register of Historic Places Inventory/Nomination Form. Worthington Historic District Committee, Columbus.


Worthington Hills
Western Hills
Northwoods
Flint
Worthington Park
Crosswoods
Worthington Green
Antrim
Northbridge
Deer Creek
Mount Carmel St. Ann's Hospital
Outerbelt E
Schrock Rd
Snouffer Rd
Brookside
N High St
Busch
Devonshire
Northgate
Northern Woods
Sharon
Worthington
E Dublin Granville Rd
Ohio State University Airport
Indian Hills
Riverlea
Park Blvd
E Lincoln Ave
Rosslyn Ave
Perry
The Gables
Ohio State School For The Blind
Olentangy Commons
East Beechwold
Maize-Morse
Northern Lights
Hyde Park
Morse Rd
Whetstone
Reed Rd
Karl Rd
Sale Rd
Norris Dr
Blenheim Rd
Chatham Rd
Northmoor
Ohio State University Golf Course
Kenny Rd
Indianola Ave
Upper Arlington
Cranbrook
E Weber Rd
Old North Columbus
The Ohio State University
North Campus
Scioto Country Club
Ohio Expo Center
Study Area
Project Area
Updated Station Location
NORTH
1 0.5 0 1
Miles
Figure 1
General Location
NiSource
NCHP Phase 6
Franklin County, Ohio
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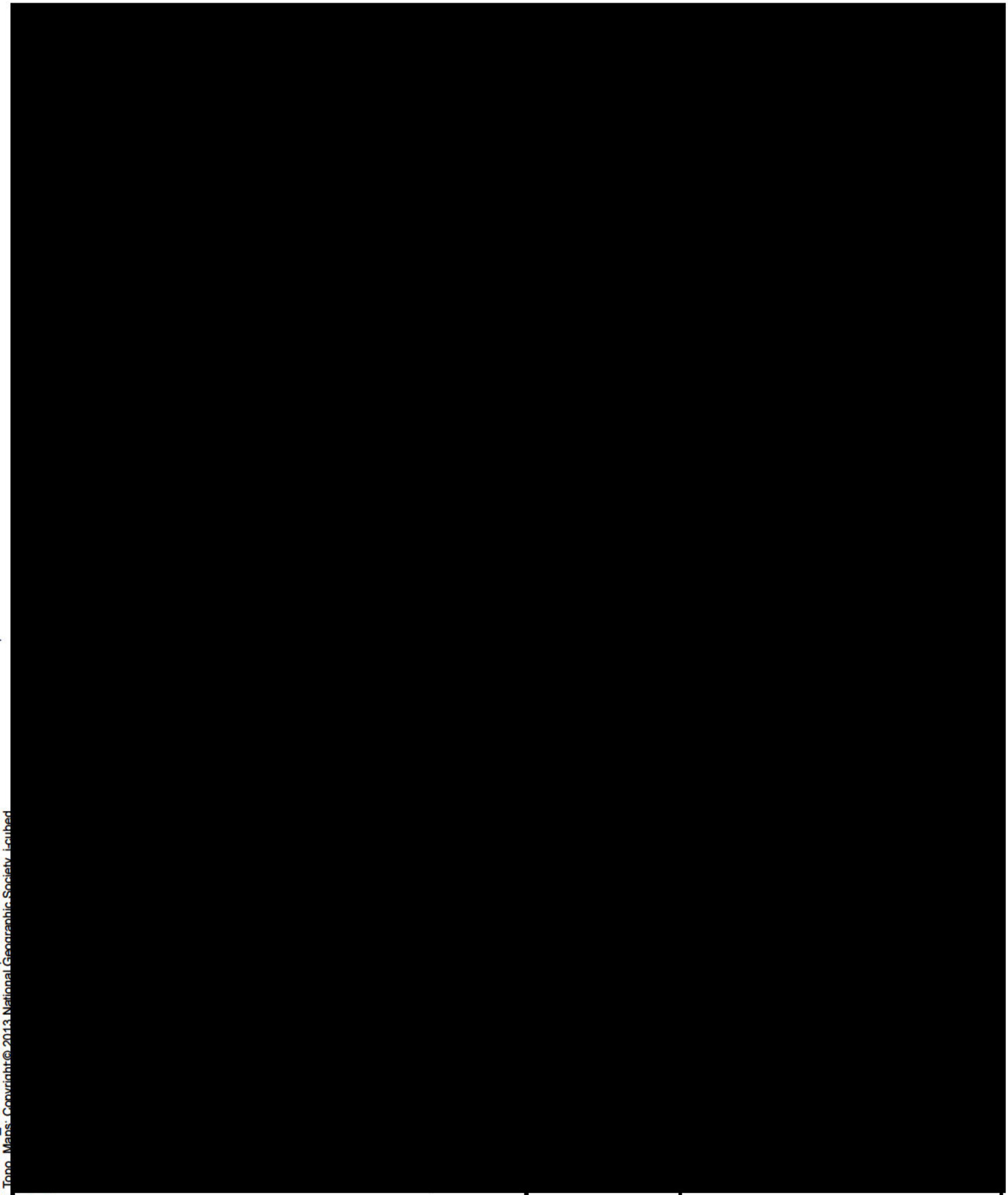
Service Layer Credits: World Street Map: Ohio Rail Development Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS
Source: ESRI, Burns & McDonnell
Issued: 2/3/2026



Study Area
Project Area
Perviously Identified Archaeological Site
Preliminary Archaeological Site
Previous Cultural Resources Survey

NORTH

1,000 0 1,000
Scale in Feet

BURNS McDONNELL

Figure 2
Archaeological Sites and Surveys
NiSource
NCHP Phase 6
Franklin County, Ohio
Page 1 of 3

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Source: ESRI, OHC, and Burns & McDonnell

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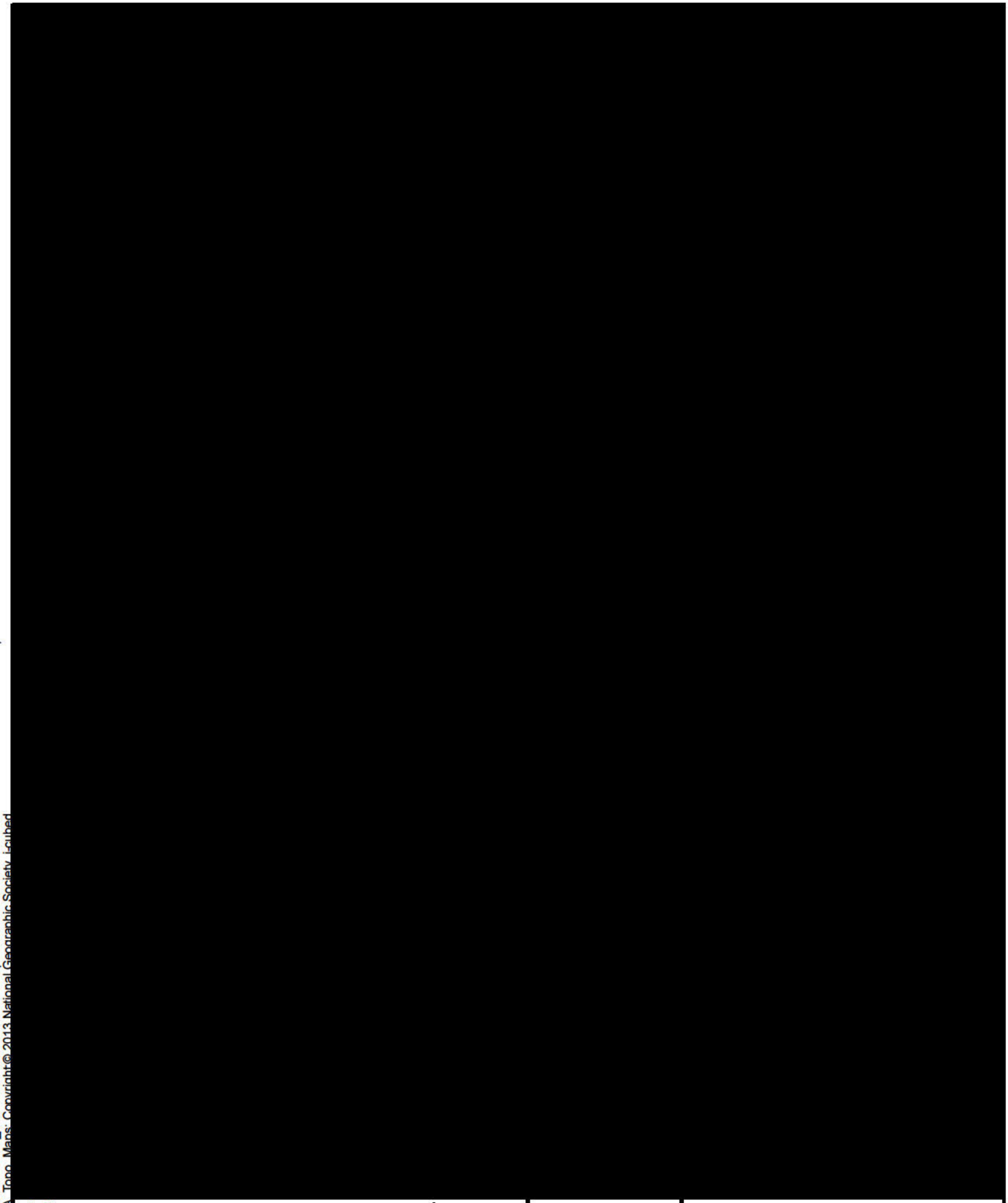

Study Area
Project Area
Perviously Identified Archaeological Site
Preliminary Archaeological Site
Previous Cultural Resources Survey

NORTH

1,000 0 1,000
Scale in Feet

BURNS McDONNELL

Figure 2
Archaeological Sites and Surveys
NiSource
NCHP Phase 6
Franklin County, Ohio
Page 2 of 3

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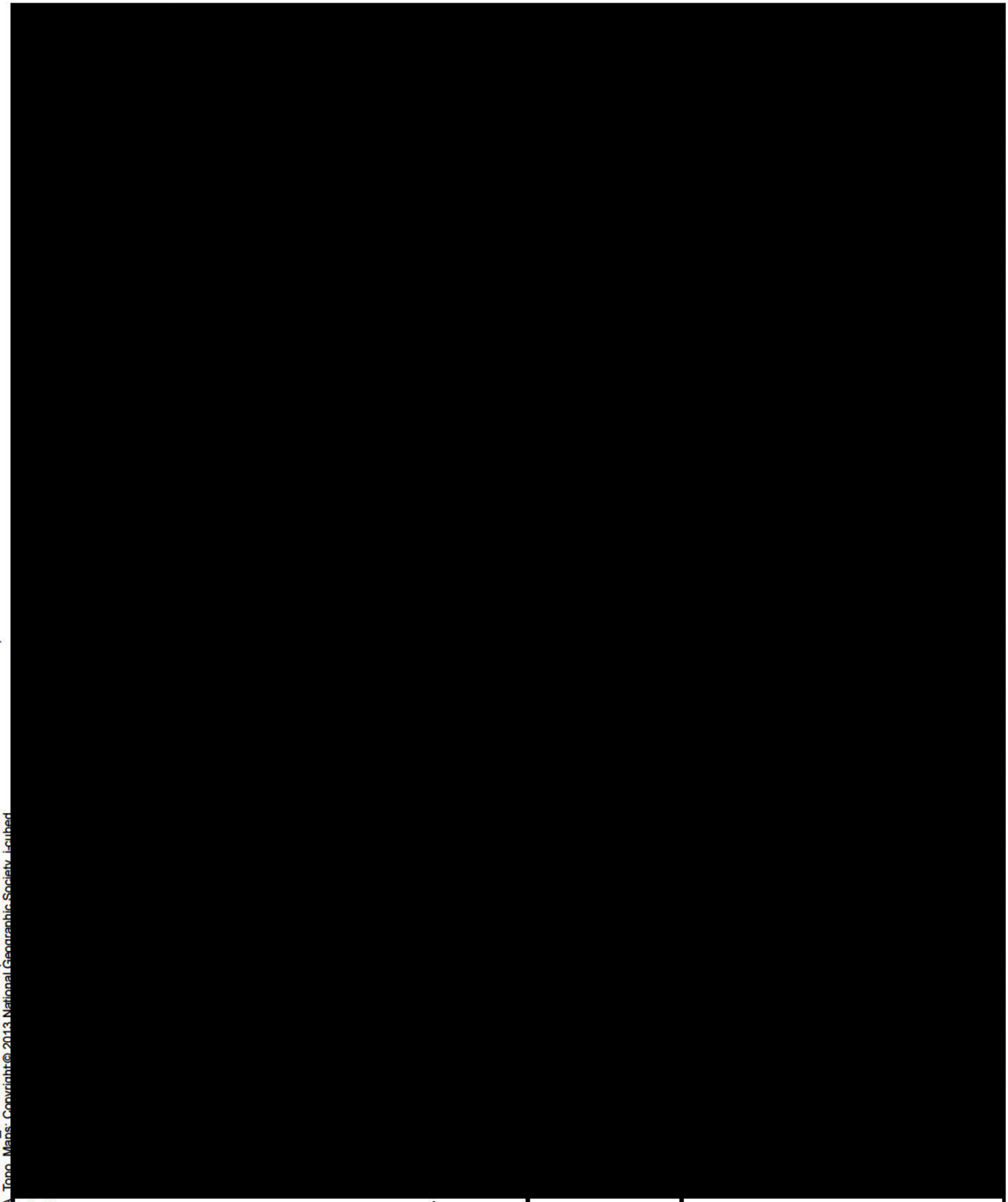
Source: ESRI, OHC, and Burns & McDonnell

Issued: 1/27/2026



Study Area
Project Area
Perviously Identified Archaeological Site
Preliminary Archaeological Site
Previous Cultural Resources Survey

NORTH

1,000 0 1,000
Scale in Feet

BURNS McDONNELL

Figure 2
Archaeological Sites and Surveys
NiSource
NCHP Phase 6
Franklin County, Ohio
Page 3 of 3

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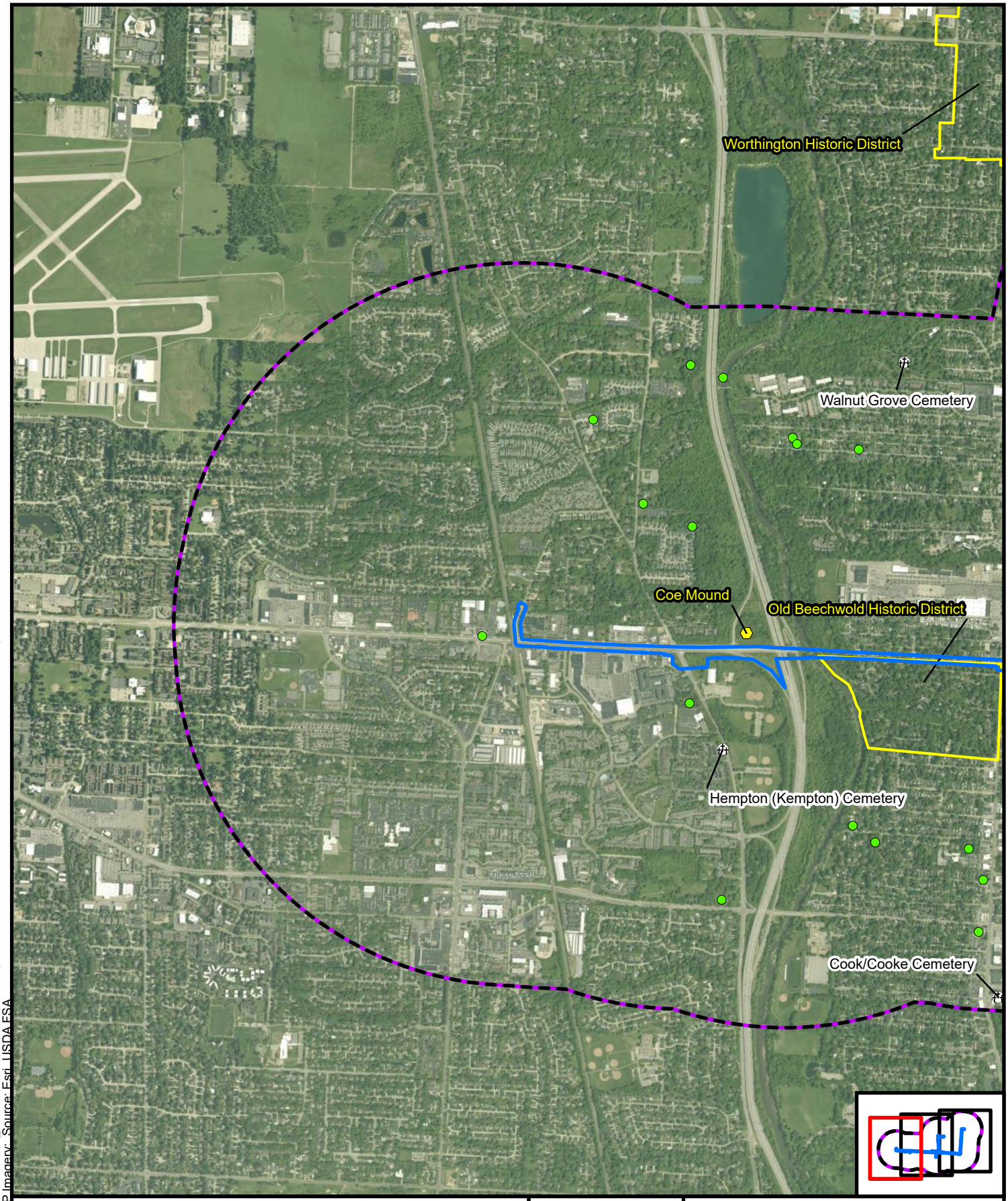
Source: ESRI, OHC, and Burns & McDonnell

Issued: 1/27/2026



Study Area
Project Area
Eligible Historic Resource
Unevaluated Historic Resource
NRHP-Listed Property
NRHP District
Cemetery

NORTH

1,000 0 1,000

Scale in Feet

BURNS McDONNELL

Figure 3
Above-Ground Historic Resources
NiSource
NCHP Phase 6
Franklin County, Ohio
Page 1 of 3

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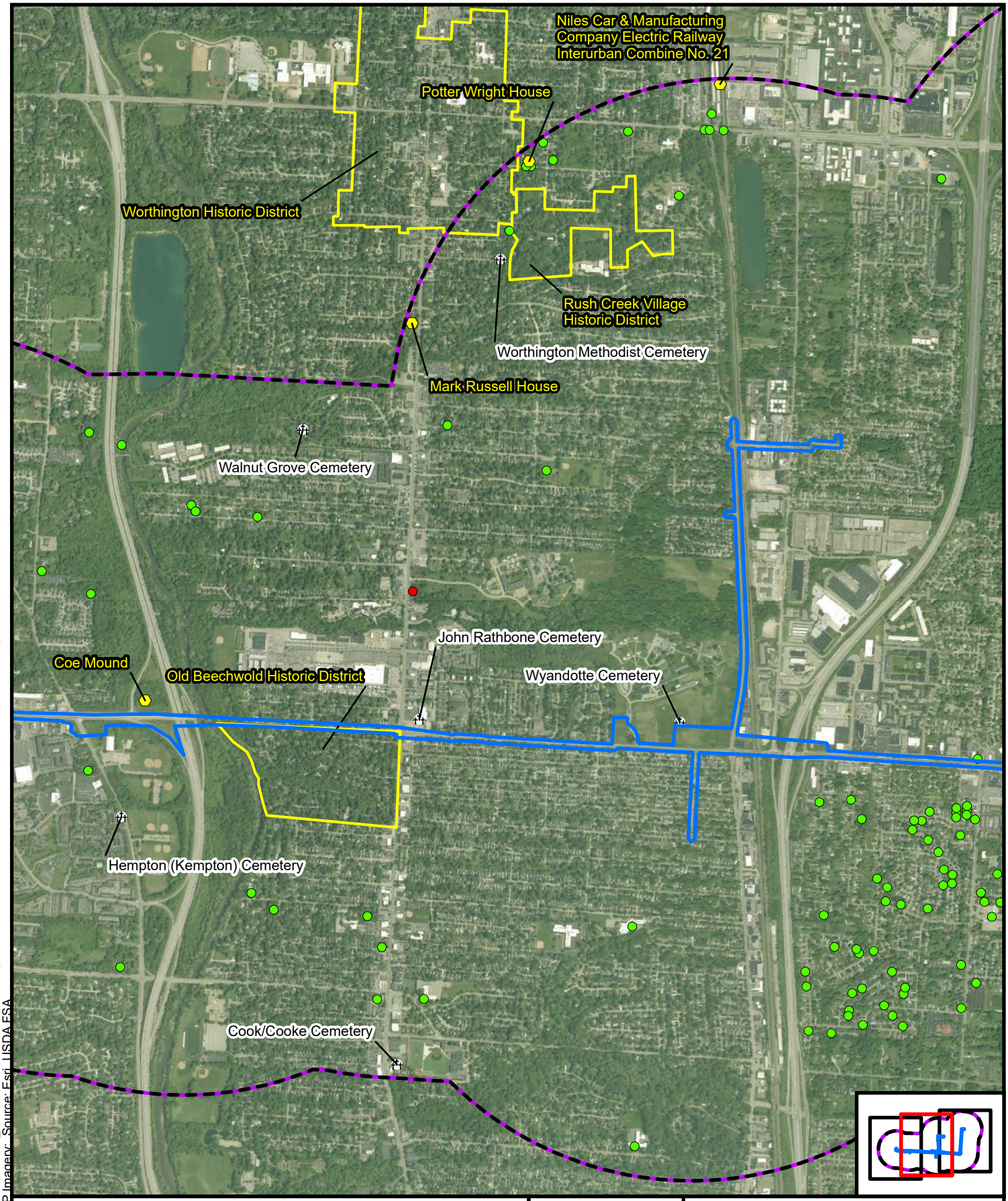
Source: ESRI, OHC, and Burns & McDonnell

Issued: 1/27/2026



Study Area
Project Area
Eligible Historic Resource
Unevaluated Historic Resource
NRHP-Listed Property
NRHP District
Cemetery

NORTH

1,000 0 1,000

Scale in Feet

BURNS McDONNELL

Figure 3
Above-Ground Historic Resources
NiSource
NCHP Phase 6
Franklin County, Ohio
Page 2 of 3

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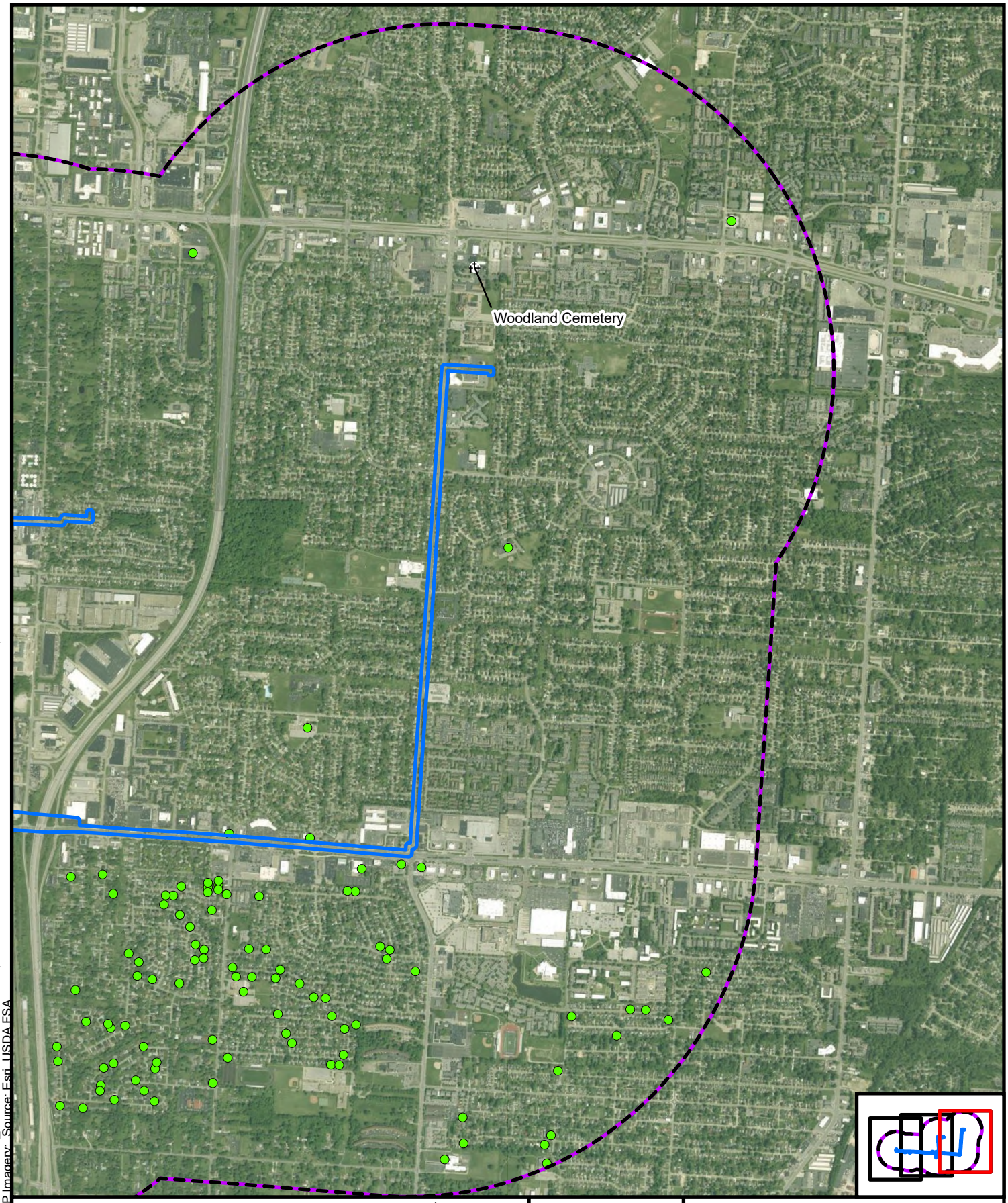
Service Layer Credits: NAIP Imagery. Source: Esri, USDA FSA

Source: ESRI, OHC, and Burns & McDonnell

Issued: 1/27/2026



Study Area
Project Area
Eligible Historic Resource
Unevaluated Historic Resource
NRHP-Listed Property
NRHP District
Cemetery

NORTH

1,000 0 1,000

Scale in Feet

BURNS McDONNELL

Figure 3
Above-Ground Historic Resources
NiSource
NCHP Phase 6
Franklin County, Ohio
Page 3 of 3

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Service Layer Credits: NAIP Imagery; Source: Esri, USDA FSA

Source: ESRI, OHC, and Burns & McDonnell

Issued: 1/27/2026

Path: Z:\Clients\TND\Nisource\182585_NCHPPHASE6\Studies\Geospatial\DataFiles\ArcDocs\NCHP Phase 6\NCHP Phase 6.aprx khouse 1/27/2026
Service Layer Credits: World Street Map: Ohio Rail Development Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

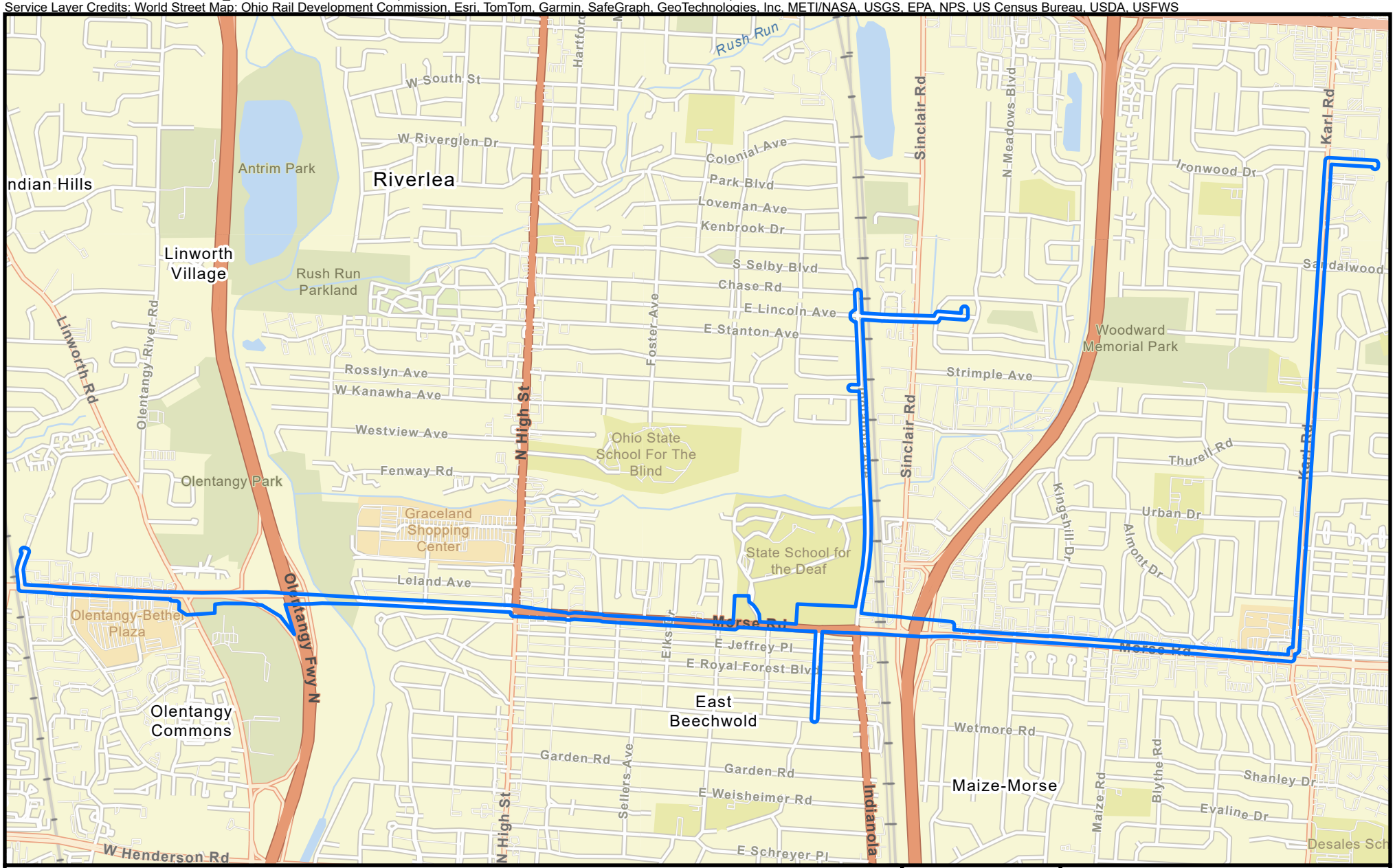


Figure 4
Street Map
NiSource
NCHP Phase 6
Franklin County, Ohio

Source: ESRI, Burns & McDonnell

Issued: 1/27/2026

In reply refer to:
2025-FRA-65961

August 17, 2025

Kimberly House
Burns & McDonnell Engineering Company, Inc.
544 White Pond Drive, Suite 300
Akron, Ohio 44320
Email: khouse@burnsmcd.com

RE: Section 106 Review-NiSource North Columbus High Pressure Phase 6 Pipeline System Replacement, Franklin County, Ohio

Dear Ms. House:

This letter is in response to the correspondence received on August 6, 2025, regarding the above-referenced project in Franklin County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code (O.R.C.) and the Ohio Power Siting Board rules for this project. The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The project will involve the replacement of approximately 5.22-miles of 20-inch pipeline, one station, and several lateral lines. The majority of the project is within existing road right-of-way and private permanent pipeline easements. A literature review was completed for the entire project. A total of seven (7) cemeteries, 13 Ohio Archaeological Inventory (OAI) sites, 264 Ohio Historic Inventory (OHI) above-ground resources, four (4) National Register of Historic Places (NRHP) properties, three (3) NRHP districts, and five (5) previously surveyed areas were identified within the 1.0-mile study area. Two of these surveys partially overlap the current project area. Additionally, one cemetery is adjacent to the project area. The Wyandotte Cemetery (OGSID 3697) is mapped within the Ohio School for the Deaf property. The listing states, *It is a mound in middle of athletic field of State School for Deaf.* It also states that the cemetery has been moved, although there is no additional supporting documentation to verify whether it has been moved or not.

After careful review of the information submitted and due to previous disturbances, the majority of the project has a low potential to encounter intact, significant archaeological deposits. However, given that a known cemetery/mound is within 55-ft of the proposed work, and there is no definitive evidence presented to verify whether it has actually been moved, the SHPO recommends a non-invasive geophysical survey for the portion of the project that is near this cemetery. Given the recent discoveries of other cemeteries (e.g., North Market cemetery in Columbus; City of Lima) that were indicated as being moved but in fact only the headstones were removed and the interments left in place, it would greatly benefit this project to have some level of archaeological investigations conducted in order to avoid costly construction delays. The geophysical survey should be conducted by an individual experienced and qualified in geophysics as it relates to archaeological context. The methods should follow our *Archaeology Guidelines* (2022). The results of the survey should be submitted in a report format to our office for review and comment. We look

forward to continued consultation regarding this project. If you have any questions, please contact me by e-mail at sbiehl@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Stephen M. Biehl, Project Reviews Manager-Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No. 1110264

In reply refer to:
2025-FRA-65961

February 17, 2026

Kimberly House
Burns & McDonnell Engineering Company, Inc.
544 White Pond Drive, Suite 300
Akron, Ohio 44320
Email: khouse@burnsmcd.com

RE: Section 106 Review: NiSource North Columbus High Pressure Phase 6 Pipeline System Replacement, Franklin County, Ohio

Dear Ms. House:

This letter is in response to the correspondence received on February 5, 2026, regarding the above-referenced project in Franklin County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code requesting cooperation among state agencies in the preservation of historic properties. The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]). An application to the Ohio Power Siting Board (OPSB) is required for this project. The OPSB is the lead agency for the undertaking.

The SHPO has previously reviewed and commented on this project on August 17, 2025, and December 30, 2025. However, since that time, the scope of the project has changed and includes the relocation of a station onto the School for the Deaf Property, thus expanding the Area of Potential Effect (APE). This puts the project within 55-ft of the Wyandotte Cemetery (OGSID 3697). A recent geophysical survey was conducted for this project near the cemetery. It was recommended in our letter of December 30, 2025, that archaeological monitoring should occur during construction activities. Based on the updated information, the SHPO continues to agree that no cultural resource studies are warranted for the majority of the project. Furthermore, we continue to agree that archaeological monitoring should be conducted in the area near the aforementioned cemetery. We also request that upon completion of the archaeological monitoring that a monitoring report is submitted to our office. If you have any questions concerning this review, please contact me by email at sbiehl@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Stephen M. Biehl

Stephen M. Biehl, Project Reviews Manager-Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No. 1112765

F.3 FAA PRE-SCREENING RESULTS

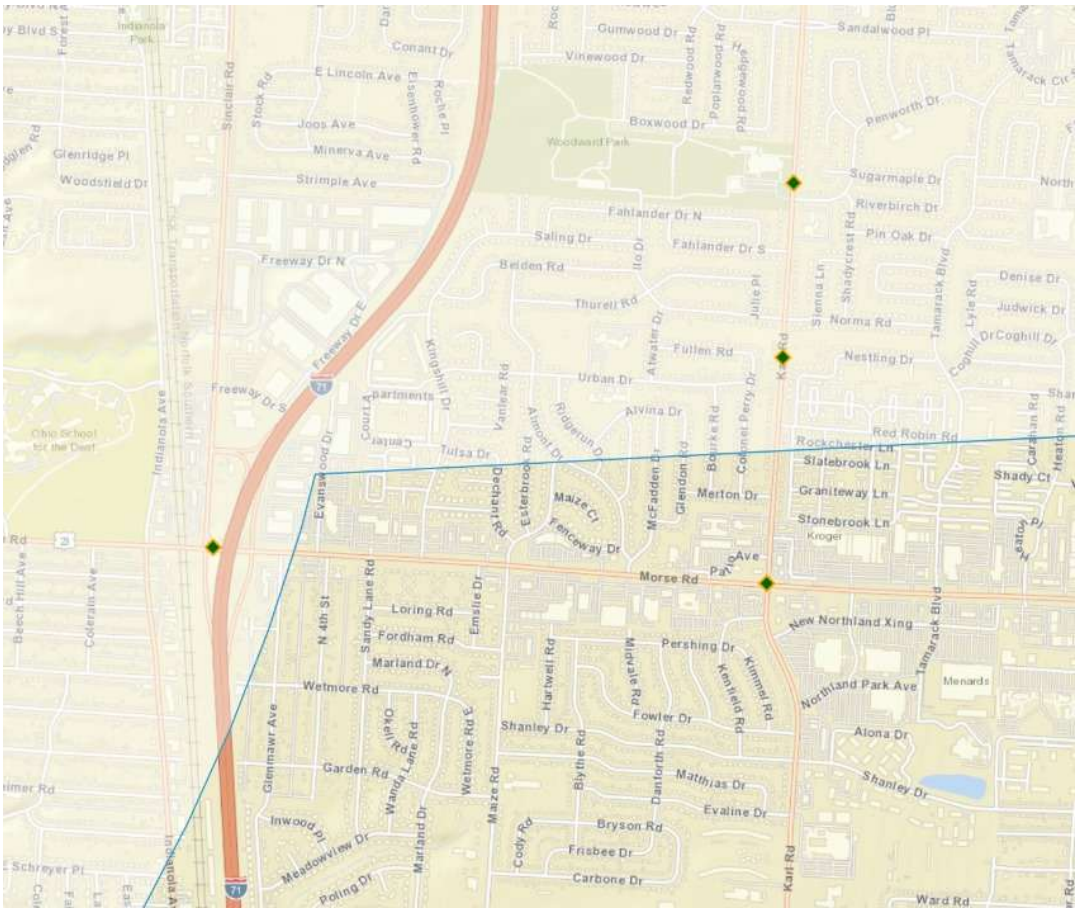
OE/AAA Pre-screening Results

Fri Jun 12 2026 14:20:47 GMT-0500 (Central Daylight Time)

Structure: Mobile Construction Equipment

Latitude	Longitude	Height	Site Elevation	AMSL
40 03 42.10 N	82 59 54.74 W	35	873	908
40 03 38.35 N	82 58 38.67 W	35	902	937
40 04 02.08 N	82 58 36.45 W	35	906	941
40 04 20.35 N	82 58 35.03 W	35	904	939

Based on the information you provided, you are not required to file notice with the FAA.



OE/AAA Pre-screening Results

Fri Jun 12 2026 14:19:49 GMT-0500 (Central Daylight Time)

Structure: Mobile Construction Equipment

Latitude	Longitude	Height	Site Elevation	AMSL
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40 03 46.51 N	83 01 42.86 W	40	736	776
40 03 43.28 N	83 00 26.15 W	40	868	908
40 03 45.43 N	83 01 10.72 W	40	807	847

Based on the information you provided, you are not required to file notice with the FAA.