

Wetland Delineation Report

NCHP Phase 3B Project

Colliers Engineering & Design Project Number: 21004202A

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Prepared for:

Prepared by:

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EXECUTIVE SUMMARY

On behalf of NiSource Inc., Colliers Engineering & Design (CED) conducted field delineations for the North Columbus High Pressure (NCHP) Pipeline Project – Phase 3B within Franklin County, Ohio (hereinafter described as "Survey Corridor"). The Survey Corridor begins at latitudinal coordinate 40.021989 N and longitudinal coordinate -82.950258 W and ends at latitudinal coordinate 40.018147 N and longitudinal coordinate -82.882347 W. The Survey Corridor is located approximately 5 miles north of Columbus, Ohio. Access to the Survey Corridor can be achieved from Woodlawn Road, Granville Street, W Johnstown Road, James Road, and Agler Road.

The Project Study Area is comprised of a 100-foot wide survey corridor centered on the proposed pipeline alignment for approximately 3.75 miles. The Survey Corridor was investigated to identify potential jurisdictional Waters of the U.S. (WOTUS) and wetlands subject to Federal or State regulatory jurisdiction. The delineation methodologies developed by the USACE and the USEPA, as described in the 1987 Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) and the subsequently issued USACE regulatory guidance regarding the identification of jurisdictional stream channels through the recognition of field indicators of an ordinary high-water mark within drainage features (Environmental Laboratory, 1987; USACE 2012; USACE 2005) were utilized during our investigation. The location and size of jurisdictional areas delineated are shown on the attached Figure 5. Delineation Results (Appendix A).

Based on the field investigations, five (5) wetland features, one (1) palustrine unconsolidated bottom (pond) feature, and seven (7) stream features were delineated within the Survey Corridor by CED on March 2nd and 3rd, 2022, October 24, 2022, and December 17, 2024. A total of 0.67 acres of palustrine forested (PFO) wetland, 0.23 acres of palustrine emergent (PEM) wetland, 0.18 acres of pond (palustrine unconsolidated bottom – PUB), 806 linear feet of perennial (R3) stream, and 1,120 linear feet of intermittent (R4) stream were delineated. It is CED's professional opinion that Wetland Features "5" through "9" and Stream Features "4" through "10" are considered jurisdictional WOTUS since they are and/or drain into Big Walnut Creek and Alum Creek. These stream and wetland features can be considered jurisdictional WOTUS since they connect and/or are directly connected to Big Walnut Creek and Alum Creek, which eventually drain to the Scioto River. The location and size of jurisdictional areas delineated are shown on Figure 5. Delineation Results (**Appendix A**).



1.0 PROJECT INFORMATION

Project Name	North Columbus High Pressure (NCHP) Pipeline Project – Phase 3B
Project Location	Woodlawn Road, Granville Street, W Johnstown Road, James Road, and
	Agler Road
Municipality	Columbus
County	Franklin
State	Ohio
Latitude/Longitude	40.021989 N / -82.950258 W to 40.018147 N / -82.882347 W
Survey Corridor Size	+/- 3.75 mi 100 feet wide survey corridor
U.S.G.S. Quadrangle	Northeast Columbus OH
Potential Jurisdictional	See Aquatic Resource Area Summary Table on Page 5
Waters of the U.S. (WOTUS)	
and wetlands	
River Basin (HUC) & sub- watershed	Upper Scioto Basin: 8 Digit HUC Code 05060001
Nearest Stream	Big Walnut Creek, Alum Creek
Navigable Water Nexus	Stream features delineated on the Survey Corridor would be considered jurisdictional WOTUS and wetlands since these features drain towards Big Walnut Creek and Alum Creek
Isolated Wetlands/Waters	No
Present (Yes/No)	



2.0 INTRODUCTION

On behalf of NiSource Inc., Colliers Engineering & Design (CED) conducted field delineations for the North Columbus High Pressure (NCHP) Pipeline Project – Phase 3B located in the greater North Columbus area within Franklin County, Ohio (hereinafter described as "Survey Corridor"). The Survey Corridor begins at latitudinal coordinate 40.021989 N and longitudinal coordinate -82.950258 W and ends at latitudinal coordinate 40.018147 N and longitudinal coordinate -82.882347 W. The Survey Corridor is located approximately 5 miles north of Columbus, Ohio. Access to the Survey Corridor can be achieved from Woodlawn Road, Granville Street, W Johnstown Road, James Road, and Agler Road. The Survey Corridor is bordered by residential homes, commercial properties, and forested areas. There are unnamed tributaries located within the Survey Corridor that eventually drain to Big Walnut Creek and Alum Creek.

The Survey Corridor was investigated to identify potential jurisdictional Waters of the U.S. (WOTUS) and wetlands subject to Federal or State regulatory jurisdiction. According to the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (USEPA) regulations described in Section 404 of the Clean Water Act (33 CFR Section 328.3 and 40 CFR Section 230.3) respectively, wetlands are "...areas that are inundated or saturated with surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."



3.0 PROPERTY DESCRIPTION

The Survey Corridor is located within the Upper Scioto River Basin (8 Digit HUC Code 05060001). Access to the Survey Corridor can be achieved from Woodlawn Road, Granville Street, W Johnstown Road, James Road, and Agler Road. The western section of the Survey Corridor drains south and east towards Alum Creek and the central and eastern sections of the Survey Corridor drain to Big Walnut Creek. The Survey Corridor does contain a floodway and a floodplain according to FEMA Floodplain Panel Maps 39049C0189K, 39049C0193K, and 39049C0194K (eff. 6/17/2008). The Survey Corridor contains approximately 35% forested communities and 65% residential properties and commercial properties. The forested areas are comprised of a mixture of oak, tulip poplar, red maple, pine, and sweetgum species that dominate the canopy layer. Big Walnut Creek is located in the eastern section and Alum Creek is located in the western section of the Survey Corridor, flowing north to south. Unnamed tributaries can be found throughout the Survey Corridor eventually discharging into Big Walnut Creek and Alum Creek.



4.0 BACKGROUND INFORMATION

Prior to on-site field investigations, several publicly available sources of information were reviewed to determine the likelihood of wetlands and surface waters occurring within Survey Corridor. These mapping resources generally include, but are not limited to, the United States Geological Survey (USGS) maps (Figure 1. Project Location Map, **Appendix A**), the U.S. Department of Agriculture - Natural Resource Conservation Service (NRCS) soils database (Figure 2. Soil Series Map, **Appendix A**), National Hydrography Dataset (NHD), and the U.S. Fish & Wildlife Service National Wetlands Inventory (NWI) database (Figure 3. National Wetlands Inventory Map, **Appendix A**).

4.1 U.S. GEOLOGICAL SURVEY MAP

The Survey Corridor appears on the *Northeast Columbus OH* Quadrangle USGS Maps (Figure 1. Project Location Map, **Appendix A**) and is depicted as developed properties which contains approximately 35% forested areas habitat communities and 65% residential and commercial properties. The USGS also depicts unnamed tributaries located within the project limits. Residential and forested areas are located within the vicinity of the Survey Corridor to the north, south, east, and west. Elevations at the Survey Corridor range from approximately 770 to 830 feet above mean sea level (MSL) based on the USGS map.

4.2 Soil Survey

The NRCS Web Soil Survey depicts the following 19 soil series map units within the Survey Corridor and Table 1 provides a description of the properties and qualities of each soil:

Table 1. NCHP Phase 3B Project USDA NRCS Soil Series

Map Unit Symbol	Map Unit Name	Drainage Class	Runoff Class	Depth to Water Table
AdC2	Alexandria silt loam, 6 to 12 percent slopes, eroded	Well Drained	High	More than 80 inches
ВеВ	Bennington silt loam, 2 to 6 percent slopes	Somewhat Poorly Drained	High	About 6 to 12 inches
BfA	Bennington-Urban land complex, 0 to 2 percent slopes	Somewhat Poorly Drained	High	About 6 to 12 inches
CbC	Cardington-Urban land complex, 6 to 12 percent slopes	Moderately Well Drained	High	About 24 to 36 inches
Crd1B1	Cardington silt loam, 2 to 6 percent slopes	Moderately Well Drained	Medium	About 12 to 24 inches
Ee	Eel silt loam, 0 to 2 percent slopes, occasionally flooded	Moderately Well Drained	Low	About 15 to 24 inches



Map Unit Symbol	Map Unit Name	Drainage Class	Runoff Class	Depth to Water Table
EIB	Eldean silt loam, 2 to 6 percent slopes	Well Drained	Low	More than 80 inches
EID2	Eldean silt loam, 12 to 18 percent slopes, eroded	Well Drained	High	More than 80 inches
So	Sloan silt loam, Columbus Lowland, 0-2 percent slopes, frequently flooded	Very Poorly Drained	Negligible	About 0 to 6 inches
Mh	Medway silt loam, occasionally flooded	Moderately Well Drained	Low	About 18 to 36 inches
Pm	Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes	Very Poorly Drained	Negligible	About 0 to 12 inches
Sh	Shoals silt loam, occasionally flooded	Somewhat Poorly Drained	Very low	About 12 to 36 inches
Pn	Pewamo low carbonate till- Urban land complex, 0 to 2 percent slopes	Very Poorly Drained	Negligible	About 0 to 12 inches
EIC2	Eldean silt loam, 6 to 12 percent slopes, eroded	Well Drained	High	More than 80 Inches
AdE2	Alexandria silt loam, 18 to 25 percent slopes, eroded	Well Drained	Very High	More than 80 inches
КеВ	Kendallville silt loam, 2 to 6 percent slopes	Well Drained	Low	More than 80 inches
Cn	Condit silt loam, 0 to 1 percent slopes	Poorly Drained	Negligible	About 0 to 12 inches
BeA	Bennington silt loam, 0 to 2 percent slopes	Somewhat Poorly Drained	High	About 6 to 12 inches
Ut	Udorthents-Urban land complex, gently rolling	-	-	More than 80 inches

Of the 19 mapped soil units, seven (7) soil units: Alexandria silt loam (AdC2), Bennington silt loam (BeB), Bennington-Urban land complex (BfA), Cardington silt loam (Crd1B1), Eel silt loam (Ee), Sloan silt loam, Columbus Lowland (So), and Pewamo silty clay loam (Pm), are listed as being hydric.



5.0 WETLAND & SURFACE WATER DELINEATION METHODOLOGY

The wetland delineation methodologies developed by the USACE and the USEPA, as described in the 1987 Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) and subsequently issued USACE regulatory guidance regarding the identification of jurisdictional stream channels through the recognition of field indicators of an ordinary high-water mark within drainage features (Environmental Laboratory, 1987; USACE 2012; USACE 2005), were utilized during our investigation. These methodologies generally involve the review of three parameters (vegetation, soils, hydrology) when making a wetland or non-wetland determination.

The Survey Corridor was walked, community types were characterized, and wetland and surface water boundaries were flagged. Sample stations were established along the boundaries to examine vegetation, soils, and hydrology. Using this data, boundaries were established based on changes in vegetation, soils, hydrology, and surface water characteristics.



6.0 WETLAND AND SURFACE WATER DELINEATION RESULTS

6.1 WETLAND AND SURFACE WATER SUMMARY

On-site field investigations of the Survey Corridor were conducted by CED on March 2nd & 3rd, 2022, October 24, 2022, and December 17, 2024. The on-site delineation did verify the presence of wetlands and surface waters within Survey Corridor. A summary of the aquatic resources identified within the Survey Corridor is provided below in Table 2: Aquatic Resource Summary. The location and size of the aquatic resources delineated are shown on Figure 5. Wetland Delineation Map (**Appendix A**).

Table 2: Aquatic Resource Area Summary Table

Aquatic Resource	PFO Area (AC)	PEM Area (AC)	Aquatic Resource	PUB Area (AC)	Aquatic Resource	R3 Length (LF)	R4 Length (LF)
W-5	0.03	-	PUB3	0.18	S-4	-	204
W-6	-	0.23	-	-	S-5	-	750
W-7	0.29	-	-	-	S-6	-	166
W-8	0.02	-	-	-	S-7	155	-
W-9	0.33	-	-	-	S-8	39	-
-	-	-	-	-	S-9	337	-
-	-	-	-	-	S-10	275	-
Total Wetlands by Class (AC)	0.67	0.23	Total Pond	0.18	Total Stream by Class (LF)	806	1,120
Total Wetlands (AC)	0.	.9	(AC)		Total Stream (LF)	1,92	26

Note 1: Cowardin Classification; PFO = palustrine forested wetland; PEM = palustrine emergent wetland; PUB = palustrine unconsolidated bottom (pond), R3 = perennial stream, R4 = intermittent stream

6.2 VEGETATION

Representative plant species within the wetland areas include the following: green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), sycamore (*Platanus occidentalis*), eastern cottonwood (*Populus deltoides*), amur honeysuckle (*Lonicera mackaii*), multiflora rose (*Rosa multiflora*), reed canary grass (*Phalaris arundinacea*), and broadleaf cattail (*Typha latifolia*).

Representative plant species within the upland areas include the following: eastern cottonwood, red maple, black cherry (*Prunus serotina*), Indian olive (*Elaeagnus angustifolia*), Tatarian honeysuckle (*Lonicera tatarica*), wild privet (*Ligustrum vulgare*), Callery pear (*Pyrus calleryana*) and tall fescue (*Schedonorus arundinaceus*).

6.3 Soils

Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil (USDA 2003). The soils in the wetland areas were variable, but for the most part, exhibited low chroma matrices with redoximorphic



features. Soils within the wetland areas on-site exhibit low chroma matrix colors and concentrations that are characteristic of reducing anaerobic conditions associated within the formation of hydric soils. Wetland soils were typically dark grayish brown (10YR 4/2), weak red (2.5Y 4/2 and 2.5Y 5/2), and dark gray (10YR 4/1) within the upper 16 inches. Redox concentrations greater than 3% were observed between 0 and 16 inches below soil surface and are typically dark yellowish brown (10YR 4/6). Soils within jurisdictional areas meet the F3 Depleted Matrix hydric soil indicator. Textures within the jurisdictional areas include clay, silt, and silty clay loam. The upland soils within each area varied from very dark grayish brown (10YR 3/2), yellowish brown (10YR 5/4 and 10YR 5/6), and dark brown (10YR 3/3) and (10YR 5/6) within the upper 16 inches. Soil textures include silt and clay.

6.4 Hydrology

On-site field investigations of the Survey Corridor were conducted by CED on March 2nd & 3rd, 2022, October 24, 2022, and December 17, 2024. The USACE Antecedent Precipitation Tool (APT) was utilized for the Survey Corridor and is provided **Appendix B**. Based the USACE APT tool, the on-site field investigations were conducted in "Wetter than Normal" precipitation conditions in March 2022, "Normal Conditions" in October 2022, and "Normal Conditions" in December 2024 (with a 30-day rolling total).

The delineated wetlands exhibited primary and secondary indicators of wetland hydrology. Positive indicators of wetland hydrology on the property included the following: surface water (A1), high water table (A2), saturation (A3), water marks (B1), and water-stained leaves (B9). Secondary indicators include drainage patterns (B10), and the FAC-neutral test (D5). Indicators of wetland hydrology are largely absent in upland areas.



7.0 WETLAND DELINEATION CONCLUSION

Five (5) wetland features, one (1) palustrine unconsolidated bottom (pond) feature, and seven (7) stream features were delineated within the Survey Corridor by CED on March 2nd and 3rd, 2022, October 24, 2022, and December 17, 2024. A total of 0.67 acres of palustrine forested (PFO) wetland, 0.23 acres of palustrine emergent (PEM) wetland, 0.18 acres of pond (palustrine unconsolidated bottom – PUB), 806 linear feet of perennial (R3) stream, and 1,120 linear feet of intermittent (R4) stream were delineated. Field investigations were conducted in accordance with the manuals, methodologies, and regulatory guidance procedures as stated in Section 5.0 Wetland and Surface Water Delineation Methodology.

It is CED's professional opinion that Wetland Features "5" through "9" and Stream Features "4" through "10" are considered jurisdictional WOTUS since they are and/or drain into Big Walnut Creek and Alum Creek. These stream and wetland features can be considered jurisdictional WOTUS since they connect to Big Walnut Creek and Alum Creek, which eventually drain to the Scioto River. The location and size of jurisdictional areas delineated are shown on Figure 5. Delineation Results (**Appendix A**).

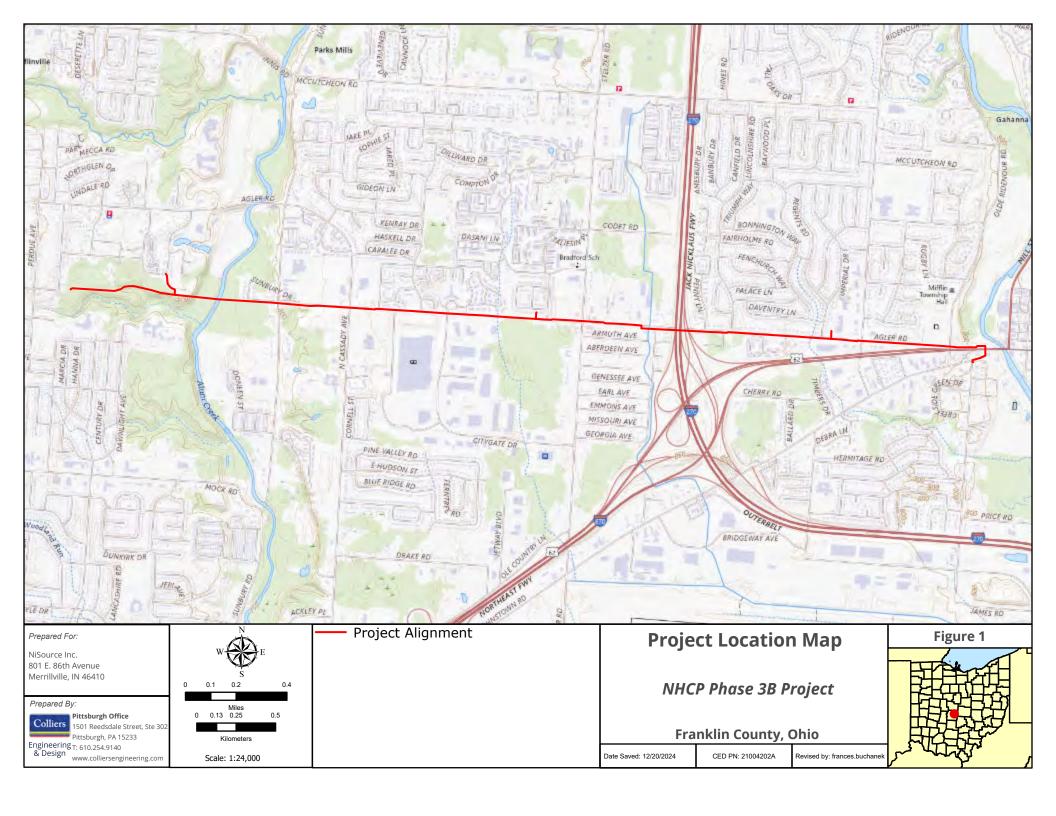


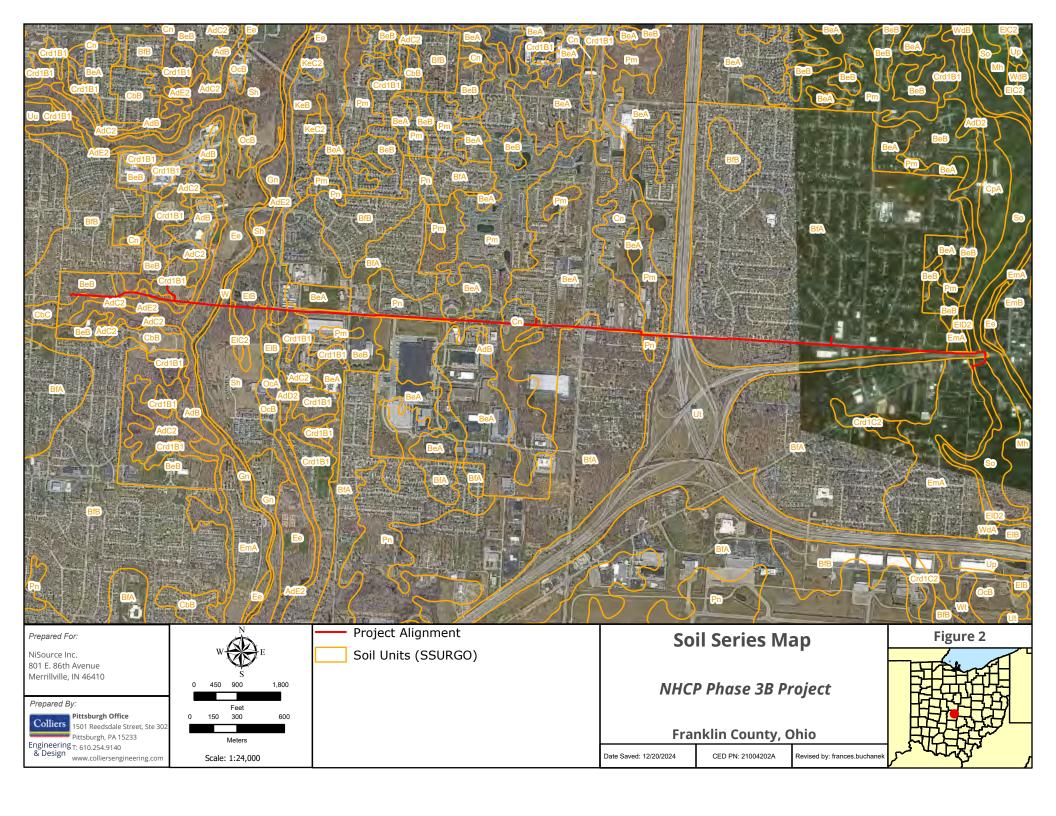
8.0 REFERENCES

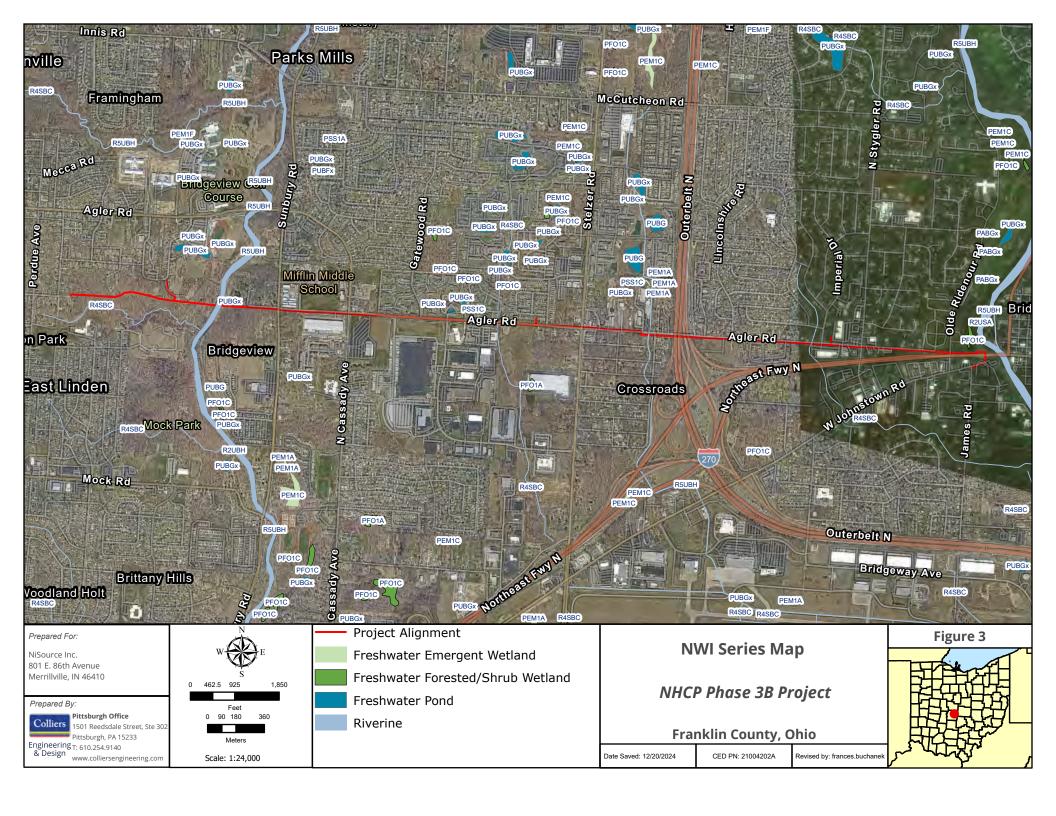
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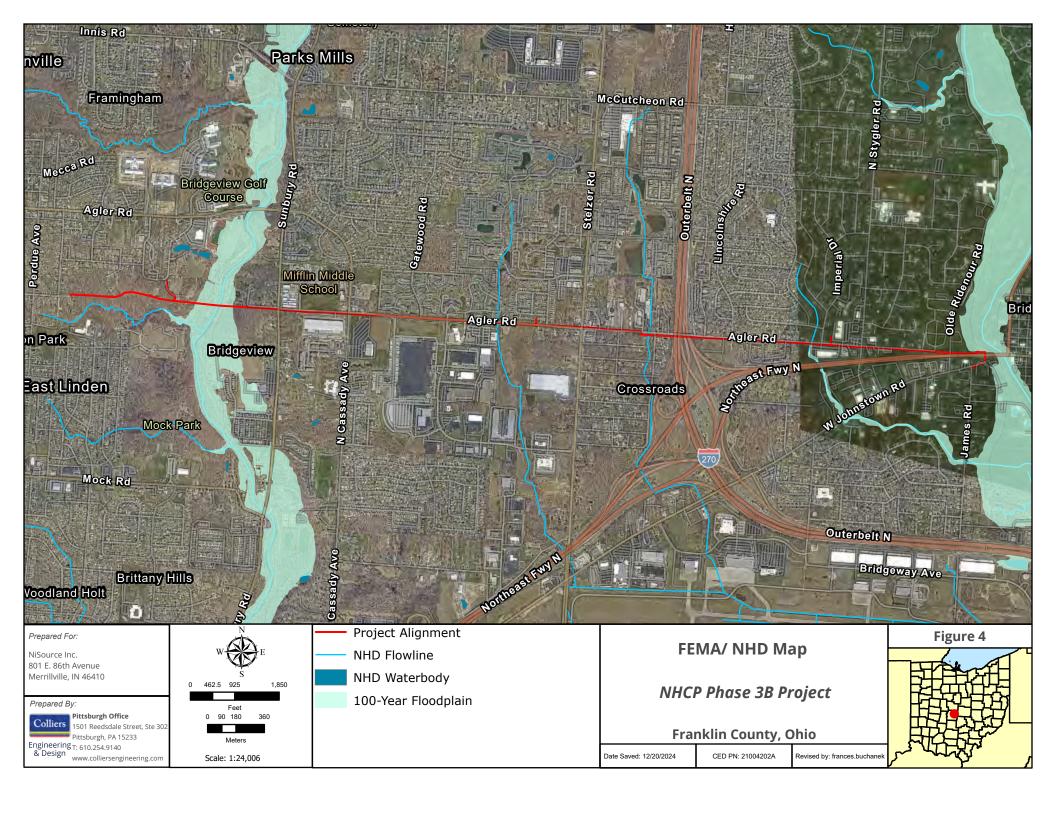


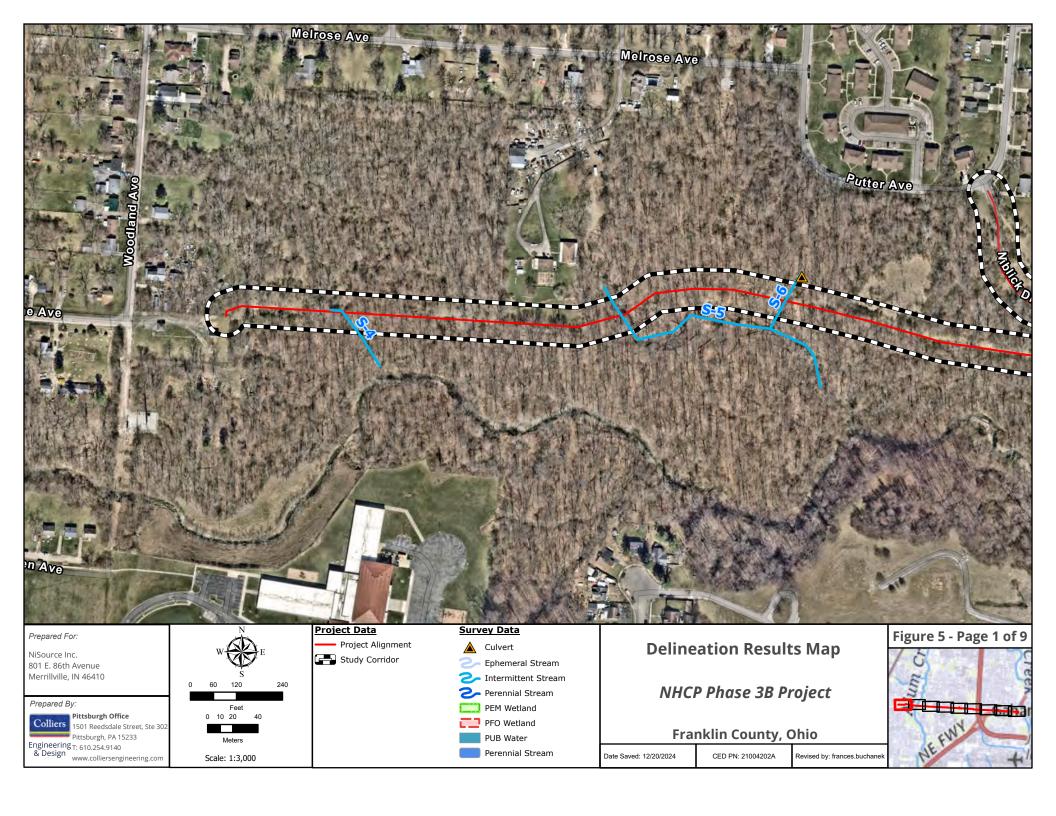
Appendix A | Figures

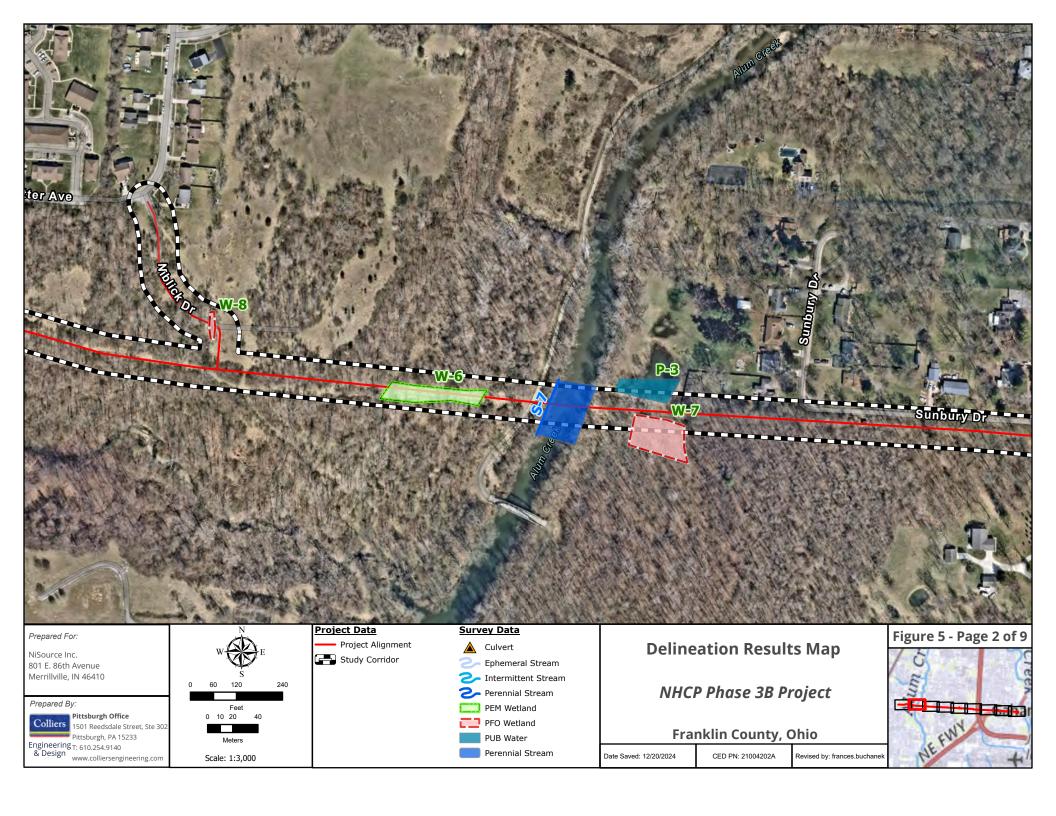




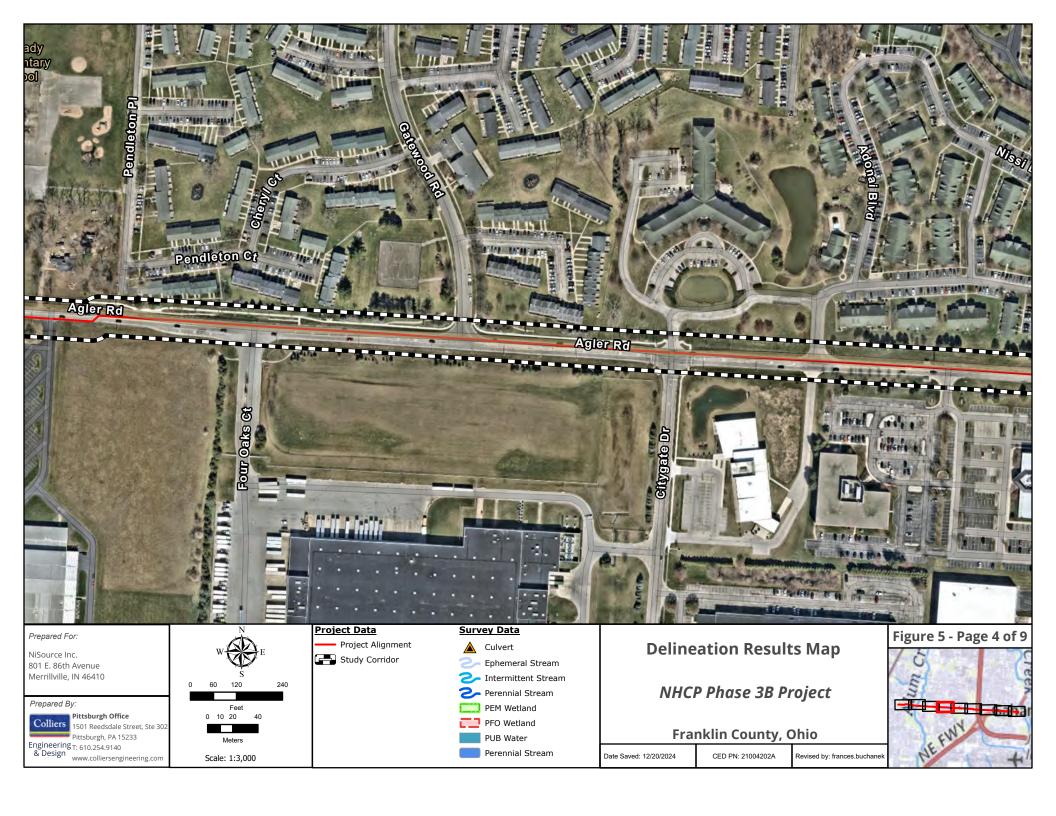




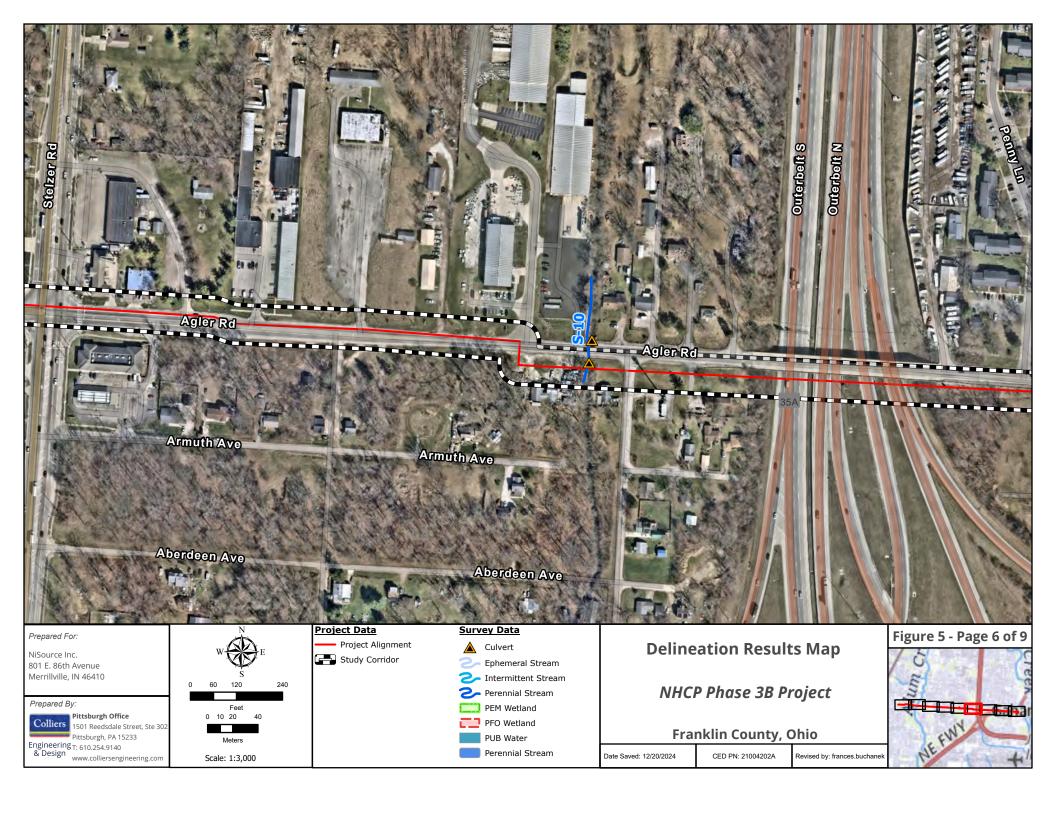


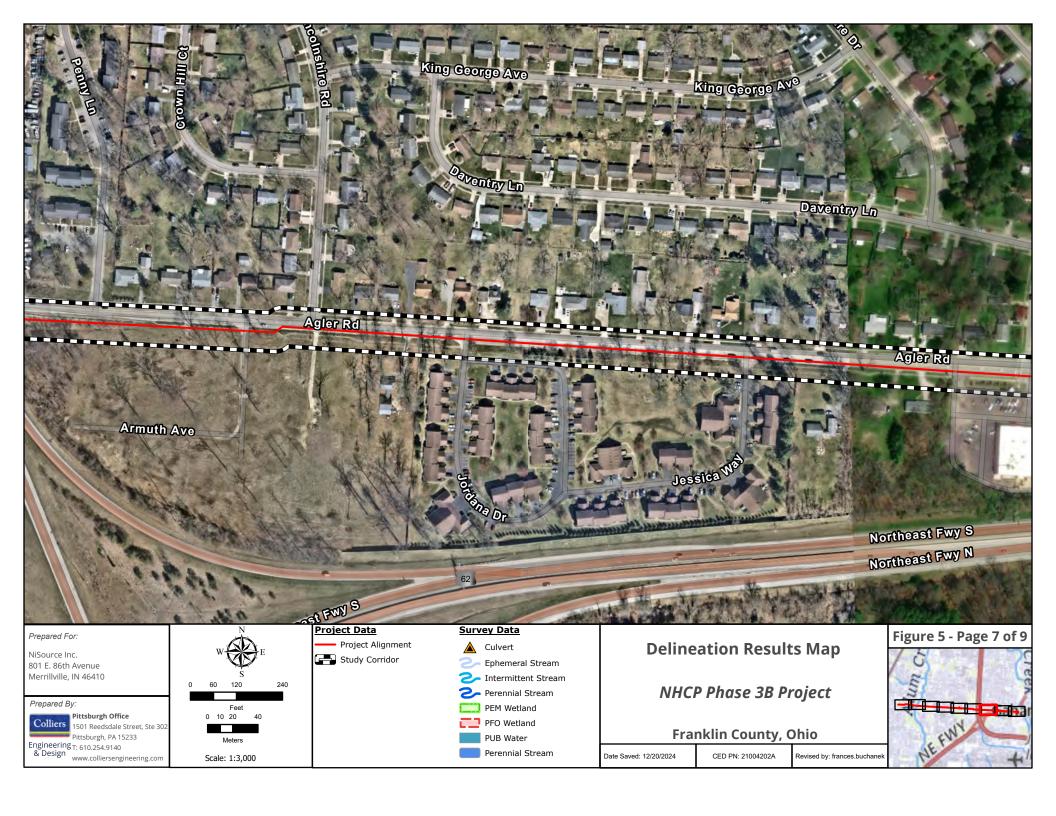


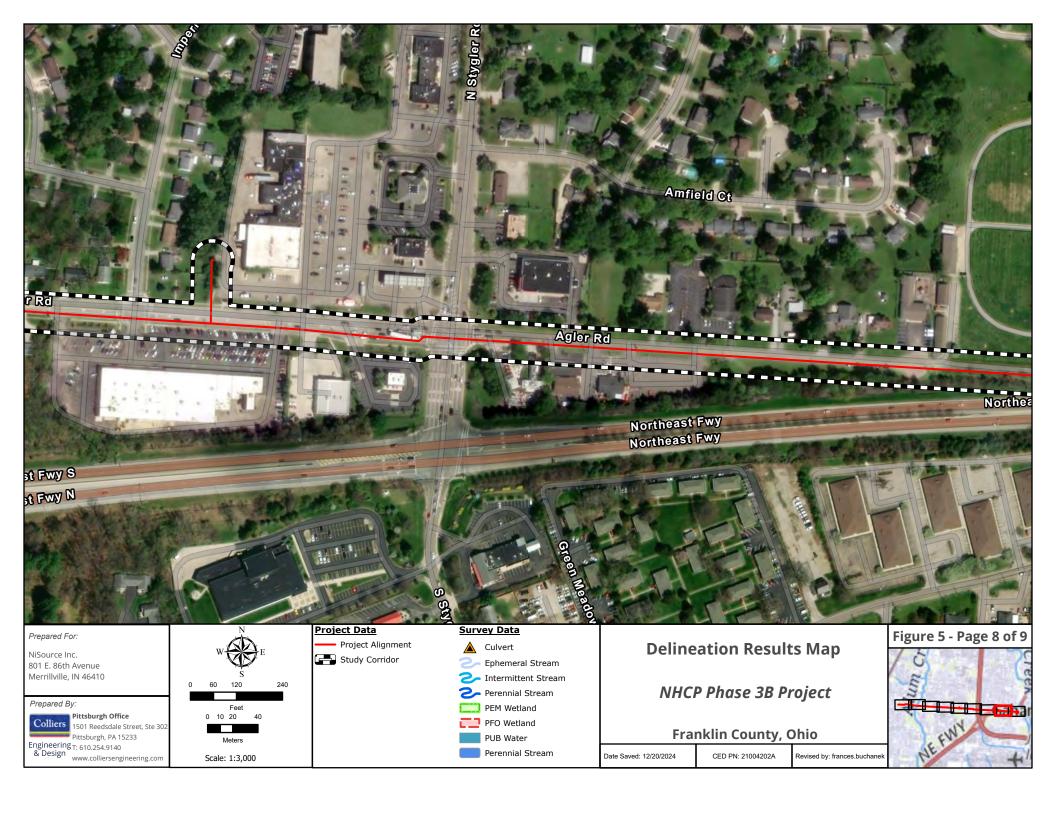


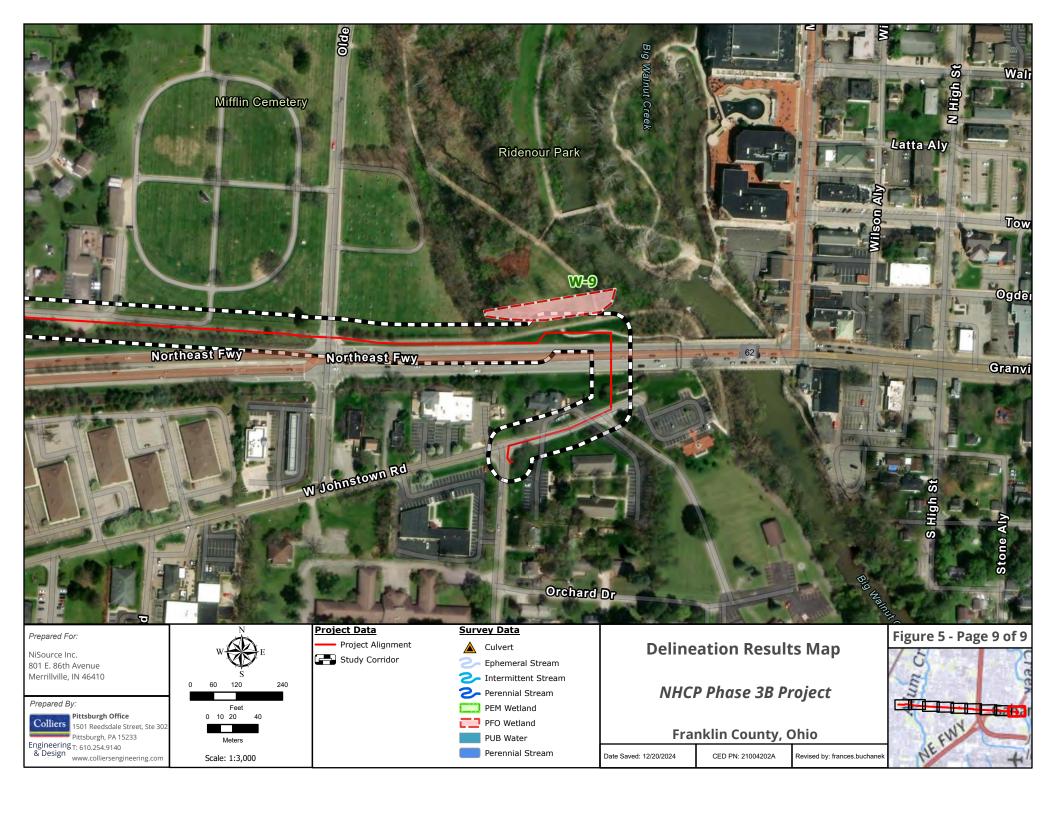














Appendix B | Data Forms

WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Columbus Frankli Sampling Date: 3/2/22 Project/Site: N(Sampling Point: WOOS (PFO) Applicant/Owner: Nisowie INR REL Section, Township, Range: T Investigator(s): Landform (hillslope, terrace, etc.): De 01651 cm Local relief (concave, convex, none): LON (4 L Slope (%): 5 Datum: Lat: NWI classification: Nowe Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No ____ (If no, explain in Remarks.) Are Vegetation N., Soil N., or Hydrology N. significantly disturbed? Are "Normal Circumstances" present? Yes Are Vegetation N. Soil V., or Hydrology N. 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? No Is the Sampled Area Hydric Soil Present? Yes No within a Wetland? Wetland Hydrology Present? No Yes Remarks: 0 101 70 WOX VEGETATION - Use scientific names of plants. Dominance Test worksheet: Absolute Dominant Indicator Tree Stratum (Plot size: 50 % Cover Species? Status Number of Dominant Species FACU That Are OBL, FACW, or FAC: **Total Number of Dominant** Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: = Total Cover Prevalence Index worksheet: Sapling/Shrub Stratum (Plot size: Total % Cover of: Multiply by: x1=___ OBL species FACW species ___ ___ x2=__ FAC species FACU species UPL species = Total Cover x 5 = ____ Herb Stratum (Plot size: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: __ 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) ¹Indicators of hydric soil and wetland hydrology must = Total Cover be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: Hydrophytic Vegetation Present? = Total Cover Remarks: (Include photo numbers here or on a separate sheet.) i NW NWPL,

Profile Description: (Describe to the d		online the absence of maiostorory
Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type ¹ Lo	- I Touture Bomorke
Tilletics/	Color (moist) % Type L	OC Texture Remarks
	- 10116119 0 0 1	1 Silty Clay lan
Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, MS=Masked Sand Grains	² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4) Stratified Layers (A5)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
2 cm Muck (A10)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3) Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	3Indicators of hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)		unless disturbed or problematic.
Restrictive Layer (if observed):		
Type:		Hydric Soil Present? YesX No
		Hydric Soil Present? Yes X No
Depth (inches):Remarks;		Tryuna dan mada ana ana ana ana ana ana ana ana ana
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YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is re	X Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is re V Surface Water (A1) L High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is re Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one is re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Roots (C3) Saturation Visible on Aerial Imagery (C9)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one is re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is re 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)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled St	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is re 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	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one is re 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 Sparsely Vegetated Concave Surface	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is re 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 Sparsely Vegetated Concave Surfaceld Observations:	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9) e (B8) 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) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is re 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 Sparsely Vegetated Concave Surface (B4) Indicator Visible on Aerial Imagery Sparsely Vegetated Concave Surface (B4) Verface Water Present?	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Si Thin Muck Surface (C7) (B7) Gauge or Well Data (D9) e (B8) 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) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is recovered by 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 (Sparsely Vegetated Concave Surface led Observations: (urface Water Present? (Saturation Present? Yes X Saturation Present?	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9) e (B8) 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) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Primary Indicators (minimum of one is re 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 (Sparsely Vegetated Concave Surface) (ald Observations: (alter Table Present? (alte	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) (B7) Gauge or Well Data (D9) e (B8) 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) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Primary Indicators (minimum of one is re 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 (Sparsely Vegetated Concave Surface) (ald Observations: (alter Table Present? (alte	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Some Thin Muck Surface (C7) (B7) Gauge or Well Data (D9) e (B8) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	Secondary Indicators (minimum of two required Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No

WETLAND DETERMINATION DATA FORM - Midwest Region

pplicant/Owner: Ni Source nvestigator(s): REK	Section, Township, Rai	State: OH Sampling Point: WOOLD P
andform (hillslope, terrace, etc.): Floon pain		(concave, convex, none): Lavelue
lope (%):		Datum.
oil Map Unit Name: ECZ	Long.	NWI classification: Nak
re climatic / hydrologic conditions on the site typical for this ti		
re Vegetation , Soil , or Hydrology , sign re Vegetation , Soil , or Hydrology , national SUMMARY OF FINDINGS – Attach site map sh	nificantly disturbed? Are urally problematic? (If ne	Normal Circumstances" present? Yes No eded, explain any answers in Remarks.)
	Is the Sampled within a Wetlar	V
PEM (LC +0 WCO6 - Ldg(5) /EGETATION – Use scientific names of plants.	PEM Win	Row, Pto/PSS on
	Absolute Dominant Indicator	Dominance Test worksheet:
1. Platanus (Plot size: 50 x 30)	% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2. Acer rulerum.	5 Y FAC	Total Number of Dominant Species Across All Strata: (B)
4		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 6x6)	ZO = Total Cover 4	Prevalence Index worksheet: Total % Cover of: Multiply by:
2 205ams Filger	2 N FAW	OBL species x 1 =
3. Carnis amonum	3 Y. FALM	FACW species x 2 =
4.		FAC species x 3 =
5		FACU species x 4 =
516	15_= Total Cover 3	UPL species x 5 =
Herb Stratum (Plot size: 515)	30 Y FALLY	Column Totals: (A) (B)
vernising alternitolia	10 N FACE	Prevalence Index = B/A =
suemonia novenora censis	5 N FACU	Hydrophytic Vegetation Indicators:
4.		1 - Rapid Test for Hydrophytic Vegetation
5.		2 - Dominance Test is >50%
6.		3 - Prevalence Index is ≤3.0¹
7		4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
8.		Problematic Hydrophytic Vegetation¹ (Explain)
9		
10.	95 = Total Cover 19	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 30x30)		Hudranhutle
1. Plant		- Hydrophytic Vegetation
4	= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separate si		

Sampling Point Woou (PE m)
of Indicators.)

Profile Description: (Describe to the deposition) Matrix	Redo	Features			77. 74. 40.	
(inches) Color (moist) %	Color (moist)	_ %	Type	Loc	Texture	Remarks
0-10 DURUIZ 95	10417-1/1	3	-	M	clay	Nemarks
		4.67		_		
Type: C=Concentration, D=Depletion, RN Hydric Soil Indicators:	N=Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: Pl	L=Pore Lining, M=Matrix.
	4 100					Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2)		Sleyed Mai				rie Redox (A16)
Black Histic (A3)		Redox (S5)			Dark Surfa	
Hydrogen Sulfide (A4)		Matrix (S				anese Masses (F12)
Stratified Layers (A5)		Mucky Min	1			ow Dark Surface (TF12)
2 cm Muck (A10)	The second secon	Gleyed Ma			Other (Exp	olain in Remarks)
Depleted Below Dark Surface (A11)	_X Deplete	o Matrix (F Dark Surfa				
Thick Dark Surface (A12)		d Dark Sur			3Indicators of I	nydrophytic vegetation and
Sandy Mucky Mineral (S1)		Depression	the second second	,		drology must be present,
5 cm Mucky Peat or Peat (S3)	11000x 1	Jepi essioi	13 (1 0)			urbed or problematic.
Restrictive Layer (if observed):					The state of the	arbod of problematics.
Type:					1 12 13 14 S.	V
турс					Hudric Soil Dro	sent? Yes No
Depth (inches):					Hydric Soil Pre	7
Depth (inches):Remarks:					nyunc son ree	
Depth (inches):					nyunc son rre	
Depth (inches):	uired; check all that an	oply)				
Depth (inches):	uired: check all that an		es (B9)		Secondary	
Depth (inches):	t.	ined Leave			Secondary I	ndicators (minimum of two required
Depth (inches):	X Water-Sta	ined Leave auna (B13))		Secondary I	ndicators (minimum of two required
Depth (inches):	₩ater-Sta Aquatic Fa	ined Leave auna (B13) atic Plants) (B14)		Secondary I Surface Drainag Dry-Se	ndicators (minimum of two required Soil Cracks (B6) pe Patterns (B10)
Depth (inches):	Water-Sta Aquatic Fa True Aqua Hydrogen	ined Leave auna (B13) atic Plants Sulfide Oc) (B14) dor (C1)	ving Roots	Secondary I Surface Drainag Dry-Sei Crayfisi	ndicators (minimum of two required Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2)
Depth (inches):	Water-Sta Aquatic Fa True Aqua Hydrogen	ined Leave auna (B13) atic Plants Sulfide Oc Rhizosphe	(B14) dor (C1) res on Li	ving Roots	Secondary I Surface Drainag Dry-See Crayfisi (C3) Saturat	ndicators (minimum of two required Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
Depth (inches):	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	ined Leave auna (B13) atic Plants Sulfide Oc Rhizosphe of Reduce	(B14) dor (C1) res on Lived Iron (C	ving Roots	Secondary I Surface Drainag Dry-Sec Crayfisi (C3) Saturat Stunted	ndicators (minimum of two required Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) ion Visible on Aerial Imagery (C9)
Depth (inches):	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	ined Leave auna (B13) atic Plants Sulfide Oc Rhizosphe of Reduce on Reducti	(B14) (B14) dor (C1) res on Lived Iron (C on in Tille	ving Roots 4)	Secondary I Surface Drainag Dry-Sec Crayfisi (C3) Saturat Stunted	ndicators (minimum of two required Soil Cracks (B6) Be Patterns (B10) ason Water Table (C2) Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Depth (inches):	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Leave auna (B13) atic Plants Sulfide Oc Rhizosphe of Reduce on Reduction	(B14) (B14) dor (C1) res on Lived Iron (C on In Tille (C7)	ving Roots 4)	Secondary I Surface Drainag Dry-Sec Crayfisi (C3) Saturat Stunted	ndicators (minimum of two required soil Cracks (86) pe Patterns (810) pe Patterns (810) pe Patterns (810) pe Patterns (C2) pe
Depth (inches):	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck B7) Gauge or	ined Leave auna (B13) atic Plants Sulfide Oc Rhizosphe of Reduce on Reduction Surface (Well Data	(B14) dor (C1) dor (C1) ded Iron (C don In Tille (C7) (D9)	ving Roots 4)	Secondary I Surface Drainag Dry-Sec Crayfisi (C3) Saturat Stunted	ndicators (minimum of two required soil Cracks (86) pe Patterns (810) pe Patterns (810) pe Patterns (810) pe Patterns (C2) pe
Depth (inches):	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck B7) Gauge or	ined Leave auna (B13) atic Plants Sulfide Oc Rhizosphe of Reduce on Reduction Surface (Well Data	(B14) dor (C1) dor (C1) ded Iron (C don In Tille (C7) (D9)	ving Roots 4)	Secondary I Surface Drainag Dry-Sec Crayfisi (C3) Saturat Stunted	ndicators (minimum of two required soil Cracks (86) pe Patterns (810) pe Patterns (810) pe Patterns (810) pe Patterns (C2) pe
Depth (inches):	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck B7) Gauge or	ined Leavi auna (B13) stic Plants Sulfide Or Rhizospher of Reduce on Reduction Surface (Well Data	(B14) dor (C1) dor (C1) ded Iron (C don In Tille (C7) (D9)	ving Roots 4)	Secondary I Surface Drainag Dry-Sec Crayfisi (C3) Saturat Stunted	ndicators (minimum of two required soil Cracks (86) pe Patterns (810) pe Patterns (810) pe Patterns (810) pe Patterns (C2) pe
Depth (inches):	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck B7) Gauge or (B8) Other (Ex	ined Leavi auna (B13) stic Plants Sulfide Or Rhizosphe of Reduce on Reducti Surface (Well Data plain in Re	(B14) dor (C1) dor (C1) ded Iron (C don In Tille (C7) (D9)	ving Roots 4)	Secondary I Surface Drainag Dry-Sec Crayfisi (C3) Saturat Stunted	ndicators (minimum of two required soil Cracks (86) pe Patterns (810) pe Patterns (810) pe Patterns (C2) pe
Depth (inches):	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck B7) Gauge or (B8) Other (Ex	ined Leavi auna (B13) stic Plants Sulfide Oo Rhizosphe of Reduce on Reducti Surface (Well Data plain in Re	(B14) dor (C1) dor (C1) ded Iron (C don In Tille (C7) (D9)	ving Roots (4) ed Soils (C	Secondary I Surface Drainag Dry-Sec Crayfisi (C3) Saturat Stunted	ndicators (minimum of two required social Cracks (B6) are Patterns (B10) ason Water Table (C2) are Burrows (C8) are Stressed Plants (D1) arphic Position (D2) eutral Test (D5)
Depth (inches): Remarks: Remarks:	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck B7) Gauge or (B8) Other (Exp	ined Leave auna (B13) stic Plants Sulfide Oc Rhizosphe of Reduce on Reducti c Surface (Well Data plain in Re sches): cches): photos, pr	(B14)	ving Roots (4) ed Soils (C	Secondary I Surface Drainag Dry-See Crayfisi Stunted Stunted FAC-N	ndicators (minimum of two required social Cracks (B6) are Patterns (B10) ason Water Table (C2) are Burrows (C8) are Stressed Plants (D1) arphic Position (D2) eutral Test (D5)
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is regulated) 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 (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Water Table Present? Yes Water Table Present? Yes Cincludes capillary fringe) Describe Recorded Data (stream gauge, reserved)	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck B7) Gauge or (B8) Other (Exp	ined Leave auna (B13) stic Plants Sulfide Or Rhizosphe of Reduce on Reducti c Surface (Well Data plain in Re uches): uches): uches): uches):	(B14)	ving Roots (4) ed Soils (C	Secondary I Surface Drainag Dry-See Crayfisi Stunted Stunted FAC-N	ndicators (minimum of two required social Cracks (B6) are Patterns (B10) ason Water Table (C2) are Burrows (C8) are Stressed Plants (D1) arphic Position (D2) eutral Test (D5)
Depth (inches): Remarks: Remarks:	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck B7) Gauge or (B8) Other (Exp	ined Leave auna (B13) stic Plants Sulfide Oc Rhizosphe of Reduce on Reducti c Surface (Well Data plain in Re sches): cches): photos, pr	(B14)	ving Roots (4) ed Soils (C	Secondary I Surface Drainag Dry-See Crayfisi Stunted Stunted FAC-N	ndicators (minimum of two required social Cracks (86) pe Patterns (810) pe Patterns (810) pe Patterns (C2) pe
Depth (inches):	Water-Sta Aquatic Fa Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck B7) Gauge or (B8) Other (Exp	ined Leave auna (B13) stic Plants Sulfide Oc Rhizosphe of Reduce on Reducti c Surface (Well Data plain in Re sches): cches): photos, pr	(B14)	ving Roots (4) ed Soils (C	Secondary I Surface Drainag Dry-See Crayfisi Stunted Stunted FAC-N	ndicators (minimum of two required social Cracks (B6) are Patterns (B10) ason Water Table (C2) are Burrows (C8) are Stressed Plants (D1) arphic Position (D2) eutral Test (D5)

Project/Site: NCHP	Sampling Date
Applicant/Owner: N. Source	State: Sampling Point: WOOR (
Investigator(s):	Section, Township, Range: TIN UTW
andform (hillslope, terrace, etc.): Deptes 51 av	Local relief (concave, convex, none): CON(Caul
Slope (%): Let:	Long: Datum.
Soil Map Unit Name: E.C.	NWI classification: PUB (TV
are climatic / hydrologic conditions on the site typical for this time of	of year? Yes V No (If no explain in Remarks)
re Vegetation . Soil . or Hydrology . significa	antly disturbed? Are "Normal Circumstances" present? Yes X No
are Vegetation <u>M</u> , Soil <u>M</u> , or Hydrology <u>P</u> naturally	y problematic? (If needed, explain any answers in Remarks.)
	ring sampling point locations, transects, important features, etc
Medical part of the control of the c	
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Wetland Hydrology Present? Yes No No	_ v
Remarks:	
EGETATION Line orientify	
EGETATION – Use scientific names of plants.	
Tree Stratum (Plot size: 430) Absol	over Species? Status
Acer Dovum 30	Number of Dominant Species
- Varavius occidentalis 13	FACW That Are OBL, FACW, or FAC: (A)
POWLYS deltoides IC	Total Number of Dominant
4	Species Across All Strata: (B)
5	Percent of Dominant Species /DD
111 76 50	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 6X13)	Prevalence Index worksheet:
1. Her your ge	Total % Cover of: Multiply by:
Platernes occidentalis 10	OBL species x1 =
Fractions Centralica 3	FACW species x2 =
	FAC species x 3 =
1.6 30 (03	FACU species x 4 =
Herb Stratum (Plot size: 5X5)	O = Total Cover (T UPL species x 5 =
Phalaris armalinarae 7	2 \ FALL Column Totals: (A) (B)
	Prevalence Index = B/A =
	Hydrophytic Vegetation Indicators:
	1 - Rapid Test for Hydrophytic Vegetation
	2 - Dominance Test is >50%
	3 - Prevalence Index is ≤3.0¹
	4 - Morphological Adaptations' (Provide supportin
	data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation (Explain)
0,	
3	1 Indicators of hydric soil and wetland hydrology must
Voody Vine Stratum (Plot size:)	be present, unless disturbed or problematic.
11/0/01/1	Hydrophytic ,
	Vegetation Present? Yes No

Sampling Point W W + (PFO)

	pth needed to document the indicator or con Redox Features	
Depth Matrix (inches) Color (moist) %	Color (moist) % Type Loc	
3-10 10/124/12 95	104R 41/6 5 L M	Clayleit
1-10 10 10 110		
	·	
	M=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators:		
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Dark Surface (S7)
Black Histic (A3)	Stripped Matrix (S6)	Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
2 cm Muck (A10)	Y Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	3Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	wetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)		unless disturbed or problematic.
Restrictive Layer (if observed):		
		V
Type:		Hydric Soil Present? Yes X No
Depth (inches):Remarks:		
Remarks:		
YDROLOGY		
YDROLOGY Wetland Hydrology Indicators:		
YDROLOGY Wetland Hydrology Indicators:	uired: check all that apply)	Secondary Indicators (minimum of two required
YDROLOGY Wetland Hydrology Indicators:	uired: check all that apply) Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1)		
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Surface Soil Cracks (B6)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Surface Soil Cracks (B6)Drainage Patterns (B10)Dry-Season Water Table (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required by the second secon	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	 Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one is required by the second secon	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one is required by the second secon	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4)	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)
YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils (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)
YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one is required by the second secon	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (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)
Primary Indicators (minimum of one is required water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils (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)
Primary Indicators (minimum of one is requested by 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)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9)	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)
Primary Indicators: Primary Indicators (minimum of one is requested 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 (B	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9)	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)
Primary Indicators (minimum of one is required by Surface Water (A1) High Water Table (A2) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Esparsely Vegetated Concave Surface	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)	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)
Primary Indicators (minimum of one is required by 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 (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes X	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9) (B8) Other (Explain in Remarks)	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)
Primary Indicators (minimum of one is required by Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present?	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No Depth (inches):	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)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required by 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 (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present?	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No Depth (inches):	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)
Primary Indicators (minimum of one is required by 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 (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Nater Table Present? Yes Saturation Present?	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction In Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No Depth (inches):	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) FAC-Neutral Test (D5)
Primary Indicators (minimum of one is required by 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 (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Nater Table Present? Yes Saturation Present?	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): W	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) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required) 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 (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Sincludes capillary fringe)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): W	Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Its (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) etland Hydrology Present? Yes No
Primary Indicators (minimum of one is required by 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 (Based by Vegetated Concave Surface Surface Water Present? Surface Water Present? Water Table Present? Water Table Present? Ves Saturation Present? Ves Saturation Present? Ves Saturation Present? Observible Recorded Data (stream gauge, months)	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): W	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) FAC-Neutral Test (D5)
Primary Indicators (minimum of one is required by 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 (Based by Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Pres	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): W	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) FAC-Neutral Test (D5)

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: North Columbus High Pressure Pipeline Project	City/C	ounty: <u>(</u>	Gahannah	/Franklin	Sampling Date: 12/17/24		1
Applicant/Owner: Campos EPC		State: OH Sampling Point: Wet 8					
Investigator(s): AAY	Section	Section, Township, Range: T/N R116W					
Landform (hillslope, terrace, etc.): Depression						: Concave	
Slope (%): <u>0-3</u> Lat: <u>40.022098</u> °	Long:	Long: -82.941762°			Datum: NAD 83		
Soil Map Unit Name: Cardington silt loam, 2 to 6 percent slopes				NWI or WWI cl	assification:	NA	
Are climatic / hydrologic conditions on the site typical for this time		es X	No	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology signific	-					X No)
Are Vegetation, Soil, or Hydrology natural				eded, explain any answe			
SUMMARY OF FINDINGS – Attach site map show	wing sam	npling	point lo	ocations, transects	, importan	t features	s, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes X No Yes X No Remarks:			Sampled a Wetlan		No		
PFO rep to Wetland 8							
VEGETATION – Use scientific names of plants.							
	olute Dom	ninant Ir		Dominance Test work			
		Y	_	Number of Dominant Sp That Are OBL, FACW, of		2	(A)
2.				Total Number of Domin			` '
3				Species Across All Stra		2	(B)
4				Percent of Dominant Sp	ecies		
5	70 T-4	-10		That Are OBL, FACW,	or FAC:	100.00	(A/B)
Sapling/Shrub Stratum (Plot size: 20')	70 = Tota	ai Covei	ſ	Prevalence Index work	ksheet:		
	20	Y	FAC	Total % Cover of:		ultiply by:	_
2				OBL species 0			-
3					x 2 = x 3 =		-
4					x 3 = x 4 =		=
5		al Cove	<u> </u>	UPL species 0		0	_
Herb Stratum (Plot size: 5')		ai Covei		Column Totals: 90		270	– (B)
1						0.00	_ ` '
2				Prevalence Index		3.00	_
3				Hydrophytic Vegetatio		:	
4				X Dominance Test isX Prevalence Index is			
5				Morphological Ada		vide support	ina
6				data in Remarks			9
8.				Problematic Hydrop	ohytic Vegeta	tion¹ (Explaiı	n)
9.							
10.				¹ Indicators of hydric soil be present, unless distu			nust
Woody Vine Stratum (Plot size:15')	= Tota	al Cove	r	<u> </u>	•		
1				Hydrophytic			
2.				Vegetation			
	= Tota	al Cove		Present? Yes	s <u> </u>	ŭ	
Remarks: (Include photo numbers here or on a separate sheet.)						
Outside growing season.							

SOIL Sampling Point: Wet 8

Profile Des	scription: (Describe	to the depth i	needed to docu	ment the	indicator	or confi	irm the absence	of indicators.)
Depth	Matrix			x Feature		2	_	
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	2.5Y 4/2	90	10YR 5/6	10	C	M	SiCL	
6-15	2.5Y 5/2	80	10YR 5/6	20	С	М	Clay	
	-			_				
	· -							
	_			_				
¹ Type: C=C	Concentration, D=Dep	letion. RM=Re	educed Matrix. C	S=Covered	d or Coate	d Sand	Grains. ² Loc	cation: PL=Pore Lining, M=Matrix.
	Indicators:		,					for Problematic Hydric Soils ³ :
Histoso	ol (A1)		Sandy	Gleyed Ma	atrix (S4)		Coast	Prairie Redox (A16)
Histic E	Epipedon (A2)			Redox (S5				anganese Masses (F12)
	Histic (A3)			d Matrix (S			Other	(Explain in Remarks)
	en Sulfide (A4)			Mucky Mir	. ,			
	ed Layers (A5)			Gleyed Ma				
	luck (A10)	- (044)	× Deplete		,			
	ed Below Dark Surface Oark Surface (A12)	e (A11)	·	Dark Surfa	ace (F6) ırface (F7)		3Indicators	s of hydrophytic vegetation and
	Mucky Mineral (S1)			Depressio	, ,			d hydrology must be present,
	lucky Peat or Peat (S3	3)	11000%	B 0 p 1 0 0 0 1 0	(1 0)			disturbed or problematic.
	Layer (if observed):							'
Type:								
Depth (ir	nches):						Hvdric Soil	Present? Yes X No
Remarks:			_				1	
Meets F3								
HYDROLO	OGY							
Wetland Hy	ydrology Indicators:							
Primary Ind	icators (minimum of o	ne is required;	check all that ap	oply)			Seconda	ary Indicators (minimum of two required)
X Surface	e Water (A1)		X Water-Sta	ined Leav	es (B9)		Sur	face Soil Cracks (B6)
X High W	ater Table (A2)		Aquatic Fa	auna (B13)		Dra	inage Patterns (B10)
X Saturat	tion (A3)		True Aqua				Dry-	-Season Water Table (C2)
Water I	Marks (B1)		Hydrogen	Sulfide O	dor (C1)		Cra	yfish Burrows (C8)
Sedime	ent Deposits (B2)		Oxidized I	Rhizosphe	res on Livi	ng Root	ts (C3) Sati	uration Visible on Aerial Imagery (C9)
	eposits (B3)		Presence		,	,		nted or Stressed Plants (D1)
	lat or Crust (B4)		Recent Iro			d Soils (· —	omorphic Position (D2)
	eposits (B5)		Thin Muck		` '		FAC	C-Neutral Test (D5)
	tion Visible on Aerial I		Gauge or					
	ly Vegetated Concave	Surface (B8)	Other (Ex	plain in Re	emarks)			
Field Obse					0			
Surface Wa			Depth (in			-		
Water Table			Depth (in			_		
Saturation F		es <u>X</u> No	Depth (in	ches):	0	_ We	etland Hydrolog	y Present? Yes X No
Describe Re	apillary fringe) ecorded Data (stream	gauge, monito	oring well, aerial	photos, pr	evious ins	pections	s), if available:	
Remarks:								
044 11								
Standing w	valer							

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WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: North Columbus High Pressure Pipeline Project	t (City/County:	Gahannal	n/Franklin	Sampling Date: 12/17/24	
Applicant/Owner: Campos EPC				State: OH	Sampling Point: Wet 9	
Investigator(s): AAY				<u> </u>	. •	
Landform (hillslope, terrace, etc.): Toeslope				-	Concave	
Slope (%): 0-3 Lat: 019161°						
Soil Map Unit Name: Sloan silt loam, Columbus Lowland, 0 t		-			·	
Are climatic / hydrologic conditions on the site typical for this					` '	
Are Vegetation, Soil, or Hydrology sig	•	·			,	
Are Vegetation, Soil, or Hydrology na	turally prol	blematic?	(If ne	eded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS - Attach site map s	howing	samplin	g point l	ocations, transects	s, important features,	etc.
			e Sampled in a Wetlar		<u> </u>	
PFO/PEM rep to Wetland 9						
VEGETATION – Use scientific names of plants.						
	Absolute	Dominant	Indicator	Dominance Test work	sheet:	
	<u> </u>	Species?		Number of Dominant S		
1. Platanus occidentalis		<u> </u>	FACW_	That Are OBL, FACW,	or FAC: 2 ((A)
3				Total Number of Domir Species Across All Stra	_	(B)
4. 5.				Percent of Dominant S That Are OBL, FACW,		(A/B)
		= Total Cov	er	·	(,	700)
Sapling/Shrub Stratum (Plot size: 15')				Prevalence Index wor		
1				Total % Cover of:	$ \begin{array}{ccc} & \underline{\qquad} & \qquad$	
2				· ·	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
3					x 3 = 0	
4					x 4 = 0	
5		= Total Cov		UPL species 0		
Herb Stratum (Plot size: 5')		10101 001	OI .	Column Totals: 11		(B)
1. Typha latifolia	70	Y	OBL			(-)
2. Epilobium hirsutum	10	N	FACW	Prevalence Index		
3. Polygonum pensylvanicum	10	N	FACW	Hydrophytic Vegetation		
4. Persicaria sagittata	10	N	OBL_	X Dominance Test is		
5				X Prevalence Index i		
6					ptations ¹ (Provide supportin s or on a separate sheet)	ıg
7					phytic Vegetation ¹ (Explain))
8				_ ,	, , ,	
9				¹ Indicators of hydric so be present, unless dist	il and wetland hydrology mu urbed or problematic.	ıst
		= Total Cov	er	, , ,	<u> </u>	
Woody Vine Stratum (Plot size:15') 1				Hydrophytic		
2				Vegetation Present? Ye	s X No	
		= Total Cov	er			
Remarks: (Include photo numbers here or on a separate sh	neet.)			ı		
Outside growing season.						

SOIL Sampling Point: Wet 9

Profile Des	cription: (Describ	e to the dept	h needed to docu	ment the	indicator	or confirm	the absence of	of indicators.)
Depth	Matrix		Redo	x Feature				
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR 4/1	20	7.5YR 5/6	20	С	М	SiC	
	•							
								,
		epletion, RM=I	Reduced Matrix, C	S=Covere	d or Coate	d Sand Gra		ation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators f	for Problematic Hydric Soils ³ :
Histosol				Gleyed Ma				Prairie Redox (A16)
	pipedon (A2)			Redox (S5				anganese Masses (F12)
	istic (A3)			d Matrix (S			Other (I	Explain in Remarks)
	en Sulfide (A4)			-	neral (F1)			
	d Layers (A5)			Gleyed M				
2 cm Mu		202 (411)	X Deplete	o Matrix (Dark Surfa				
	d Below Dark Surfa ark Surface (A12)	ace (ATT)			ace (F6) urface (F7)		3Indicators	of hydrophytic vegetation and
	Mucky Mineral (S1)			Depressio	, ,			hydrology must be present,
	ucky Peat or Peat (110000	Dopressio	113 (1 0)			disturbed or problematic.
	Layer (if observe	. ,					1	alota of problematic
		•						
ı -			<u>——</u>				Hydria Sail I	Present? Yes X No
Depth (in							nyuric 30ii i	Present? Yes <u>X</u> No
Remarks:								
HYDROLO	GY							
Wetland Hv	drology Indicator	'S'						
1			ed; check all that ap	anly)			Secondar	ry Indicators (minimum of two required)
l -		Tone is require			(DO)			
X Surface	` ,		Water-Sta		` ,			ace Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa					nage Patterns (B10)
X Saturati			True Aqua					Season Water Table (C2)
Water M	` '		Hydrogen				-	fish Burrows (C8)
	nt Deposits (B2)					-		ration Visible on Aerial Imagery (C9)
Drift De			Presence		•	•		ted or Stressed Plants (D1)
_	at or Crust (B4)		Recent Iro			l Soils (C6		morphic Position (D2)
Iron Der			Thin Muck				FAC-	-Neutral Test (D5)
	ion Visible on Aeria		_					
	y Vegetated Conca	ave Surface (B	8) Other (Ex	olain in Re	emarks)			
Field Obser	vations:							
Surface Wat	ter Present?		lo Depth (in			_		
Water Table	Present?	Yes X N	lo Depth (in	ches):	0	_		
Saturation P			lo Depth (in			Wetla	and Hydrology	Present? Yes X No
(includes ca	pillary fringe)							_
Describe Re	corded Data (strea	ım gauge, mor	nitoring well, aerial	pnotos, pr	evious ins	pections), i	ır avallable:	
Remarks:								
Standing w	ater							
								

Reset Form	Print Form

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: North Columbus High Pressure Pipeline Proje	ct (City/County	: Gahannal	n/Franklin	Sampling Date	e: <u>12/17/2</u> 4	4
Applicant/Owner: Campos EPC				State: OH	Sampling Poir	nt: <u>Up 8</u>	
Investigator(s): AAY		Section, To	wnship, Ra	nge: T/N R116W			
Landform (hillslope, terrace, etc.): Sideslope			•	-	Convex		
Slope (%): <u>3-5</u> Lat: _40.022016°						83	
Soil Map Unit Name: Alexandria silt loam, 6 to 12 percent s		-		·	<u> </u>		
Are climatic / hydrologic conditions on the site typical for thi							
Are Vegetation, Soil, or Hydrologys	-					× No)
Are Vegetation, Soil, or Hydrologyr	naturally pro	blematic?	(If ne	eded, explain any answe	rs in Remarks.)		
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocations, transects	, important	features	s, etc.
Hydrophytic Vegetation Present? Yes N Hydric Soil Present? Yes N			e Sampled			,	
Wetland Hydrology Present? Yes N	lo X	with	in a Wetlar	nd? Yes	No^	<u>· </u>	
Remarks:		·					
Upland woodlands adjacent to Wetland 8							
VEGETATION – Use scientific names of plants							
Tree Stratum (Plot size:30')	Absolute % Cover	Dominant Species?		Dominance Test work			
1. Populus deltoides	30		FAC	Number of Dominant Sp That Are OBL, FACW, or		1	(A)
2. Prunus serotina	30	Y					(, ,)
3. Acer rubrum	10	N		Total Number of Domin Species Across All Stra		5	(B)
4							()
5				Percent of Dominant Sp That Are OBL, FACW, of		20.00	(A/B)
Continue (Charab Charabana (District)	70	= Total Cov	/er	Prevalence Index work	kshoot:		
Sapling/Shrub Stratum (Plot size: 20') 1. Elaeagnus angustifolia	40	Y	FACU	Total % Cover of:		tiply by:	
Lonicera tatarica	40	Y		OBL species 0			_
3. Ligustrum vulgare		Y		FACW species 0			
4.				FAC species 40			
5.				FACU species150			
	120	= Total Cov	/er	UPL species0	x 5 =	0	_
Herb Stratum (Plot size: 5')				Column Totals: 19	<u>)</u> (A) _	720	_ (B)
1				Prevalence Index	= B/A =	3.79	
2				Hydrophytic Vegetation			_
4.				Dominance Test is	>50%		
5.				Prevalence Index is			
6.				Morphological Adap			ting
7				data in Remarks	•		,
8				Problematic Hydrop	onytic vegetation	on" (Explaii	n)
9				¹ Indicators of hydric soi	l and watland h	vdrology m	nuet
10				be present, unless distu			iust
Woody Vine Stratum (Plot size:15')		= Total Cov	/er				
1				Hydrophytic			
2.				Vegetation		V	
		= Total Cov	/er	Present? Yes	s No	<u>×</u>	
Remarks: (Include photo numbers here or on a separate	sheet.)						
Outside growing season.	,						

SOIL Sampling Point: Up 8

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

(inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remain 0-6 10YR 3/2 100 SiL SiCL Gravelly	
	arks
6-15 10YR 5/4 100 SiCL Gravelly	
	_
·	
	_
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. PL=Pore Linin Hydric Soil Indicators: Indicators for Problematic Hydronic State of the Control of the Contr	
•	aric Solis :
Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Iron-Manganese Masses (F	=12)
Black Histic (A3) Stripped Matrix (S6) Other (Explain in Remarks)	
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1)	
Stratified Layers (A5) Loamy Gleyed Matrix (F2)	
2 cm Muck (A10) Depleted Matrix (F3)	
Depleted Below Dark Surface (A11) Redox Dark Surface (F6)	tation and
Thick Dark Surface (A12)	
5 cm Mucky Peat or Peat (S3) unless disturbed or problema	
Restrictive Layer (if observed):	
Type:	
Depth (inches): Hydric Soil Present? Yes	No <u>×</u>
Remarks:	
HYDROLOGY	
HYDROLOGY Wetland Hydrology Indicators:	
Wetland Hydrology Indicators:	um of two required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of minimum	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6))
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of minimum	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of minimum of minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10)	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of minimum of minimu	e (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of minimum of minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)	e (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of minimum of minimu	e (C2) rial Imagery (C9) nts (D1)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of minimum of minimu	e (C2) rial Imagery (C9) nts (D1)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of minimum of minimum of minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Plants Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2 Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	e (C2) rial Imagery (C9) nts (D1)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aeri Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plant Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2 Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Wetland Hydrology Present? Yes Yes Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes Yes Cincludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, a	e (C2) rial Imagery (C9) nts (D1) 2)

Reset Form Print Form

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: North Columbus High Pressure Pipeline Project	City/Cour	nty: Gahannal	n/Franklin	Sampling Date: 12	2/17/24
Applicant/Owner: Campos EPC			State:	Sampling Point: U	lp 9
Investigator(s): AAY					
Landform (hillslope, terrace, etc.): Sideslope		Local relief	(concave, convex, none):	Convex	
Slope (%): <u>5-8</u> Lat: <u>40.019084</u> °	Long: <u>-8</u>	2.881988°		Datum: NAD 83	
Soil Map Unit Name: Udorthents-Urban land complex, gently rolling	 J		NWI or WWI cl	assification: NA	
Are climatic / hydrologic conditions on the site typical for this time of				emarks.)	
Are Vegetation, Soil, or Hydrology significan					No
Are Vegetation, Soil, or Hydrology naturally			eded, explain any answe		
SUMMARY OF FINDINGS – Attach site map showing					atures, etc.
Hydrophytic Vegetation Present? Yes No _X					
Hydric Soil Present? Yes NoX	_ "	the Sampled ithin a Wetlar		No X	
Wetland Hydrology Present? Yes No X	_ "	itiiiii a vvetiai	iu: 165		
Remarks:					
Upland maintained lawn/early successional veg adjacent to W	etland 9				
VEGETATION – Use scientific names of plants.					
Absolu Tree Stratum (Plot size: 30')		ant Indicator s? Status	Dominance Test work	sheet:	
1			Number of Dominant Sp That Are OBL, FACW, of		(A)
2.			Total Number of Domin		、,
3			Species Across All Stra	· · ·	(B)
4			Percent of Dominant Sp	pecies	
5			That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size: 15')	= Total C	Cover	Prevalence Index work	ksheet:	
	Y	NI	Total % Cover of:	Multiply	by:
2			OBL species0		0
3				^_	0
4				^	0.00
5			FACU species0 UPL species0		0
Herb Stratum (Plot size: 5')	= Total C	Jover	Column Totals: 10	~	·00 (B)
1. Schedonorus arundinaceus 90	Y	FACU			
2. Trifolium repens 10		FACU	Prevalence Index		00
3			Hydrophytic Vegetatio		
4			Dominance Test is Prevalence Index is		
5			Morphological Adap		supporting
6			data in Remarks	s or on a separate s	sheet)
8.			Problematic Hydrop	ohytic Vegetation ¹ (Explain)
9.			1, ,, , , , , ,		
10			¹ Indicators of hydric soi be present, unless distu		
Woody Vine Stratum (Plot size:15')) = Total (Cover		· ·	
1			Hydrophytic		
2.			Vegetation	_	,
	= Total C	Cover	Present? Yes	s No_>	<u>`</u>
Remarks: (Include photo numbers here or on a separate sheet.)			l		
,					

SOIL Sampling Point: Up 9

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

Depth	Matrix			x Feature:					
(inches)	Color (moist)	<u></u> %	Color (moist)	<u></u> %	Type ¹	Loc ²	<u>Texture</u>	Remark	S
0-6	10YR 3/3	100					SiL		
6-12	10YR 5/6	100		. <u></u>			CL		
	-			-					
		·				-			
¹ Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, CS	=Covered	d or Coate	d Sand Gra		ion: PL=Pore Lining	
Hydric Soil	Indicators:						Indicators fo	r Problematic Hydri	c Soils ³ :
Histosol				Sleyed Ma	. ,			airie Redox (A16)	
	oipedon (A2)			Redox (S5				ganese Masses (F12	2)
	stic (A3)			Matrix (S			Other (Ex	cplain in Remarks)	
	en Sulfide (A4)			Mucky Mir					
	d Layers (A5) uck (A10)			Gleyed Ma d Matrix (I					
	d Below Dark Surfac	e (A11)		Dark Surfa					
-	ark Surface (A12)	· (*)			ırface (F7)		³ Indicators of	hydrophytic vegetat	ion and
Sandy N	lucky Mineral (S1)		Redox [Depressio	ns (F8)		wetland h	ydrology must be pre	esent,
5 cm Mu	icky Peat or Peat (S	3)					unless dis	sturbed or problemat	ic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil Pr	esent? Yes	No <u>×</u> _
Remarks:									
l									
HYDROLO	GY								
	drology Indicators:								
	cators (minimum of o	ne is require	d: check all that an	nlv)			Secondary	Indicators (minimum	of two required)
	Water (A1)		Water-Stai		es (R9)			e Soil Cracks (B6)	<u> </u>
	ater Table (A2)		Aquatic Fa					ge Patterns (B10)	
Saturati			True Aqua					eason Water Table (0	(2)
	larks (B1)		Hydrogen					sh Burrows (C8)	,
	nt Deposits (B2)		Oxidized F		, ,	na Roots (-	tion Visible on Aerial	Imagery (C9)
	posits (B3)		Presence			•	· —	d or Stressed Plants	
	at or Crust (B4)		Recent Iro					orphic Position (D2)	. ,
	oosits (B5)		Thin Muck			,	· —	leutral Test (D5)	
Inundati	on Visible on Aerial I	magery (B7)	Gauge or \	Nell Data	(D9)				
	Vegetated Concave		-						
Field Obser			<u>-</u>						
Surface Wat	er Present? Y	es N	o X Depth (ind	ches):		_			
Water Table	Present? Y	es N	o X Depth (ind	ches):		_			
Saturation P	resent? Y	es N	o <u>X</u> Depth (ind	ches):		Wetla	and Hydrology P	resent? Yes	No <u>×</u> _
(includes ca	pillary fringe)	dallas mar	itoring wall social	hotos ==	ovious is-	noctions) :	f available:		
Describe Re	corded Data (stream	yauye, mon	nomig well, aenal p	motos, pr	evious IIIS	peciions), I	ı avallable.		
Domaria									
Remarks:									

Site:	N	CHP	Rater(s):	RE	Date: 3 2 7
S	Subtotal first p	40. C. L. C. L.			WOOS
D	18	Metric 5. Special	Wetlands.		PFO
max 10 pts.	subtotal	Check all that apply and score as Bog (10) Fen (10) Old growth forest (10) Mature forested wetland Lake Erie coastal/tributa Lake Erie coastal/tributa Lake Plain Sand Prairie Relict Wet Prairies (10) Known occurrence state Significant migratory so Category 1 Wetland. S	d (5) ary wetland-unrestricte ary wetland-restricted as (Oak Openings) (10 e/federal threatened o ngbird/water fowl hab ee Question 1 Qualita	hydrolo or endar oitat or u	ogy (5) Ingered species (10) Usage (10) String (-10)
5	23				erspersion, microtopography.
max 20 pts.	subtotal	6a. Wetland Vegetation Commun			Community Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous area
		Score all present using 0 to 3 sca Aquatic bed Emergent		1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a
		Shrub Forest Mudflats	-	2	significant part but is of low quality Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a sma
		Open water Other 6b. horizontal (plan view) Intersp		3	part and is of high quality Present and comprises significant part, or more, of wetland vegetation and is of high quality
		Select only one.	· ·	Alexa Da	
		High (5)			Escription of Vegetation Quality Low spp diversity and/or predominance of nonnative or
		Moderately high(4) Moderate (3)		ow	disturbance tolerant native species
		Moderately low (2) Low (1) None (0) 6c. Coverage of invasive plants. to Table 1 ORAM long form for lis	Refer	nod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spi can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
		or deduct points for coverage Extensive >75% cover (Moderate 25-75% cover (Sparse 5-25% cover (-1	(-5) r (-3)	igh	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
		Nearly absent <5% cov Absent (1)		at and	Open Water Class Quality
		6d. Microtopography.		0	Absent <0.1ha (0.247 acres)
		Score all present using 0 to 3 scal		1	Low 0.1 to <1ha (0.247 to 2.47 acres)
		Vegetated hummucks/ti		2	Moderate 1 to <4ha (2.47 to 9.88 acres)
		Coarse woody debris >	15cm (6in)	3	High 4ha (9.88 acres) or more
		Standing dead >25cm (Amphibian breeding po		topon	raphy Cover Scale
		Campinolan dieeding po		0	Absent
			h	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
	1 (0	+1		3	Present in moderate or greater amounts

End of Quantitative Rating. Complete Categorization Worksheets.

woody debris removal

toxic pollutants

farming

nutrient enrichment

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Site:	MCHR	Rate	r(s): 2 E	Date: 3 3 22
O max 10 pts	171	ric 5. Special Wetland all that apply and score as indicated.	nds.	WEST.
7	Met	Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland Lake Erie coastal/tributary wetland Lake Plain Sand Prairies (Oak Ope Relict Wet Prairies (10) Known occurrence state/federal th Significant migratory songbird/wate Category 1 Wetland. See Questio	-restricted hydro enings) (10) reatened or end er fowl habitat or n 1 Qualitative F	angered species (10) rusage (10)
5				
max 20 pts.		etland Vegetation Communities.	Vegetation 0	Community Cover Scale Absent or comprises <0.1ha (0.2471 acres) contiguous area
	Score	all present using 0 to 3 scale. Aquatic bed Emergent Shrub	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
	5	Forest Mudflats Open water	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
	6b. hor	Other	3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality
	Select	only one.		escription of Vegetation Quality
		High (5)	low	Low spp diversity and/or predominance of nonnative or
	1	Moderately high(4) Moderate (3)	1011	disturbance tolerant native species
	6c. Cov	Moderately low (2) Low (1) None (0) verage of invasive plants. Refered 1 ORAM long form for list. Add	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
		ct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	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
		Nearly absent <5% cover (0)	M. alfat an	Open Water Class Quality
		Absent (1)	Mudifat and	d Open Water Class Quality Absent <0.1ha (0.247 acres)
		rotopography. Il present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acres)
	50018 8	Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88 acres)
	10	Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more
	O C	Standing dead >25cm (10in) dbh Amphibian breeding pools		raphy Cover Scale
			0	Absent Secretary and appoints or if more common
			1	Present very small amounts or if more common of marginal quality
		12	2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
	1 cat N	rod 2	3	Present in moderate or greater amounts and of highest quality

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Site: NCHQ Rate	er(s): 7	Date	e: 33 22
3 \ subtotal first page		V	F000
D 3 Metric 5. Special Wetla	nds.		PPC
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 Lake Erie coastal/tributary wetland	I-restricted hyd	ydrology (10) rology (5)	
Lake Plain Sand Prairies (Oak Operation Relict Wet Prairies (10) Known occurrence state/federal the Significant migratory songbird/wate Category 1 Wetland. See Question	reatened or en	r usage (10)	
Metric 6. Plant commun	nities, in	terspersion, microtopog	raphy.
x 20 pts. subtotal 6a. Wetland Vegetation Communities.	Vegetation	Community Cover Scale	
Score all present using 0 to 3 scale. Aquatic bed	0	Absent or comprises <0.1ha (0.2471 acro	
Emergent Shrub	1	Present and either comprises small part vegetation and is of moderate quality, of significant part but is of low quality	
7 Forest Mudflats Open water	2	Present and either comprises significant vegetation and is of moderate quality o part and is of high quality	
Other_ 6b. horizontal (plan view) Interspersion.	3	Present and comprises significant part, o	r more, of wetland
Select only one.	-	vegetation and is of high quality	
High (5)	Narrative I	Description of Vegetation Quality	
Moderately high(4) Moderate (3)	low	Low spp diversity and/or predominance of disturbance tolerant native species	of nonnative or
Moderately low (2) Low (1) None (0) 6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add	mod	Native spp are dominant component of the although nonnative and/or disturbance can also be present, and species divers moderately high, but generally w/o present threatened or endangered spp	tolerant native spp sity moderate to
or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	high	A predominance of native species, with r and/or disturbance tolerant native spp absent, and high spp diversity and ofte the presence of rare, threatened, or en	absent or virtually n, but not always,
Nearly absent <5% cover (0)			
Absent (1)		Open Water Class Quality	_
 Microtopography. Score all present using 0 to 3 scale. 		Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)	4.0
Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88 acres)	_
Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	-
Standing dead >25cm (10in) dbh Amphibian breeding pools	2.3	raphy Cover Scale	_
	0	Absent	
	1	Present very small amounts or if more co of marginal quality	
1.4	2	Present in moderate amounts, but not of quality or in small amounts of highest q	
That mod 2.	3	Present in moderate or greater amounts and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

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subtotal this page

Site:	NCI	40	Thet 8	Rater(s):	Apay1	Date: 12/12/2
max 10 pts	100	Metri Check all	ic 5. Special that apply and score as Bog (10) Fen (10) Old growth forest (10) Mature forested wetlan Lake Erie coastal/tribu Lake Erie coastal/tribu Lake Plain Sand Prain	nd (5) tary wetland-unresitary wetland-restrictions (Oak Openings)	tricted hydro	logy (10) gy (5)
4	130	Meti		songbird/water fowl See Question 1 Question	habitat or us lalitative Rat es, inte	rspersion, microtopography.
max 20 pt	s. subtotal		tland Vegetation Comm		0	ommunity Cover Scale Absent or comprises < 0.1ha (0.2471 acres) contiguous are
		-	Il present using 0 to 3 so Aquatic bed		1	Present and either comprises small part of wetland's
		-	Emergent			vegetation and is of moderate quality, or comprises a
		-	Shrub			significant part but is of low quality
			Forest		2	Present and either comprises significant part of wetland's
		6	Mudflats			vegetation and is of moderate quality or comprises a smi
		1	Open water			part and is of high quality
		1	Other		3	Present and comprises significant part, or more, of wetland
		6h ho	rizontal (plan view) Inter	spersion.		vegetation and is of high quality
			only one.			
			High (5)		Narrative De	scription of Vegetation Quality
			Moderately high(4)		low	Low spp diversity and/or predominance of nonnative or
			Moderate (3)			disturbance tolerant native species
			Moderately low (2)		mod	Native spp are dominant component of the vegetation,
		1	Low (1)			although nonnative and/or disturbance tolerant native signal can also be present, and species diversity moderate to
			None (0)			can also be present, and species diversity moderate
		6c. Cc	overage of invasive plan	ts. Refer		moderately high, but generally w/o presence of rare
		to Tab	le 1 ORAM long form for	r list. Add		threatened or endangered spp
			uct points for coverage		high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtuall
			Extensive >75% cov	ver (-5)		and/or disturbance tolerant hative spp absolution absent, and high spp diversity and often, but not always
			Moderate 25-75% c	over (-3)		the presence of rare, threatened, or endangered spp
			Sparse 5-25% cove			the presence of rare, uneateried, or or dangered
			Nearly absent <5%	cover (0)		The state of the s
			Absent (1)		Mudflat and	Open Water Class Quality
		-	icrotopography.		0	Absent <0.1ha (0.247 acres)
		Score	all present using 0 to 3	scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acres)
		30016	Vegetated hummuc	ks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88 acres)
			Coarse woody debr	is >15cm (6in)	3	High 4ha (9.88 acres) or more
			Standing dead >25	em (10in) dbh		
			Amphibian breeding	pools	Microtopog	graphy Cover Scale
					0	Absent
					1	Present very small amounts or if more common
					All the state of t	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
The last training	Manual Control of the					and of highest quality

90

End of Quantitative Rating. Complete Categorization Worksheets.

Site:	NC	HP.W	49	Rater(s):	449	Date:	12/17/24
		Bantrin 1	Wetland	Area (size)			
5	0	MIGILIC 1.	AACTIGILA	71100101			
max 6 pts.	subtotal	Select one size	class and assign cres (>20.2ha) (6	pts)			
		25 to	<50 acres (10.1 to <25 acres (4 to <	o <20.2ha) (5 pts)			
		× 3 to <	10 acres (1.2 to < <3 acres (0.12 to	4ha) (3 pts)			
		0.1 to	<0.3 acres (0.04 cres (0.04ha) (0	to <0.12ha) (1 pt)			
5	Q	Metric 2.	Upland	buffers and	surroundi	ng land use.	
max 14 pts.	subtotal	2a. Calculate av	verage buffer wid	th. Select only one a	nd assign score. D	o not double check.	
		WIDE	JM. Buffers average	age 25m to <50m (8)	around wetland per 2 to <164ft) around	wetland perimeter (4)	
		NARR	OW. Buffers ave	erage 10m to <25m (ers average <10m (<	32ft to <82ft) aroun	d wetland perimeter (1)	
		2b. Intensity of s	surrounding land	use. Select one or o	double check and a	verage.	
		LOW.	Old field (>10 ve	ears), shrub land, you	ing second growth		3)
		HIGH.	Urban, industria	II, open pasture, row	cropping, mining, c	onstruction. (1)	
150	13	Metric 3.	Hydrolo	gy.			
max 30 pts.	subtotal 3	The state of the s	Vater. Score all		3b.	Connectivity. Score all that app	y.
		Other	H groundwater (! groundwater (3))		Between stream/lake and Part of wetland/upland (e	other human us
			nal/Intermittent s	urface water (3)		Part of riparian or upland	corridor (1)
	3	The second secon		t (lake or stream) (5) ot only one and assign		Duration inundation/saturation. Semi- to permanently inu	undated/saturate
			7.6in) (3)).7m (15.7 to 27.	6in) (2)		Regularly inundated/satu Seasonally inundated (2))
	36	× <0.4m	(<15.7in) (1)	logic regime. Score	one or double che	Seasonally saturated in ck and average.	upper 30cm (12)
		None o	r none apparent	(12) Check all dist			water)
		Recove	ring (3)	ditch		filling/grading	
		Recent	or no recovery (1) dike weir		road bed/RR track dredging	
					ater input	other	
R	XIN	letric 4.	Habitat /	Alteration a	and Devel	opment.	
x 20 pts. su	btotal 4a	Substrate dist	urbance. Score	one or double chec	k and average.		
			none apparent (Service day			
		Recoveri	ng (2)				
	4b.	The second secon	r no recovery (1 oment. Select of	nly one and assign	score.		
		Excellent Very good	(7)				
		Good (5)					
		Moderate Fair (3)	ly good (4)				
		Poor to fa	ir (2)				
	4c. F	Poor (1) Habitat alteratio	n. Score one o	r double check and	d average.		
	F		one apparent (9		urbances observe		
		Recovered		mowing		shrub/sapling remove herbaceous/aquatic	A STATE OF THE PARTY OF THE PAR
	-, L		no recovery (1)	clearcut		sedimentation	
141				selective woody o	e cutting lebris removal	dredging	
The second secon				The second secon			
subtotal this	0000			toxic po	llutants	nutrient enrichment	

Site:	11/0	110	Great 9	Rater(s)	: Aray		Date: 17/12/24
	btotal first pa						
0	31		c 5. Special				
max 10 pts.			Bog (10) Fen (10) Old growth forest (10) Mature forested wetland Lake Erie coastal/tributa Lake Erie coastal/tributa Lake Plain Sand Prairie Relict Wet Prairies (10) Known occurrence state Significant migratory so Category 1 Wetland. S	d (5) ary wetland-unreary wetland-restres (Oak Opening e/federal threate ingbird/water fov see Question 1 Company	ned or endanged habitat or use Qualitative Rat	gy (5) gered species (10) sage (10) ting (-10)	
2	301	Metr	ic 6. Plant co	mmuniti	es, inte	erspersion, microt	opograpny.
max 20 pts.	subtotal	6a Wetl	and Vegetation Commu	nities.	Vegetation C	ommunity Cover Scale	
			present using 0 to 3 sca		0	Absent or comprises < 0.1ha (0.3	2471 acres) contiguous area
			Aquatic bed			Present and either comprises sr	nall part of wetland's
		3	Emergent			vegetation and is of moderate significant part but is of low qu	
		1	Shrub		2	Present and either comprises si	gnificant part of wetland's
		1	Forest Mudflats			vegetation and is of moderate	quality or comprises a small
		The last of the la	Open water			part and is of high quality	
		A STATE OF THE PARTY OF THE PAR	Other		3	Present and comprises significa	
		6b. horiz	contal (plan view) Intersp	persion.		vegetation and is of high qua	ity
		Select or			Marratina Da	escription of Vegetation Quality	
		THE RESERVE TO SERVE THE PARTY OF THE PARTY	High (5)		low	Low spp diversity and/or predo	minance of nonnative or
			Moderate (3)			disturbance tolerant native s	pecies
			Moderate (3) Moderately low (2)		mod	Native spp are dominant comp	onent of the vegetation,
		10	Low (1)			although nonnative and/or di	sturbance tolerant native spp
			None (0)			can also be present, and spe	ecies diversity moderate to
		6c. Cove	erage of invasive plants.	Refer		moderately high, but general threatened or endangered s	
			1 ORAM long form for li	st. Add	high	A predominance of native spe	
			t points for coverage	- (-5)	1119	and/or disturbance tolerant	native spp absent or virtually
			Extensive >75% cover Moderate 25-75% cov	er (-3)		absent, and high spp divers	ity and often, but not always,
			Sparse 5-25% cover (the presence of rare, threat	ened, or endangered spp
		X	Nearly absent <5% co	ver (0)		A COLUMN	
			Absent (1)		Mudflat and	d Open Water Class Quality Absent <0.1ha (0.247 acres	
		6d. Micro	otopography.			Low 0.1 to <1ha (0.247 to 2.4	
		Score all	present using 0 to 3 sc	ale.		Moderate 1 to <4ha (2.47 to	9.88 acres)
			Vegetated hummucks	>15cm (fin)	3	High 4ha (9.88 acres) or mo	
			Coarse woody debris Standing dead >25cm	(10in) dbh			
			Amphibian breeding p	ools	Microtopos	graphy Cover Scale	
			J. a. ipi iibia b. c. c. c.		0	Absent	if
					1	Present very small amounts	or it more common
						of marginal quality Present in moderate amour	nts but not of highest
					2	present in moderate amount	ts of highest quality
						Present in moderate or gre	ater amounts
						Present in moderate or greand of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

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

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ľ	10	ı

THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	CONTRACTOR OF THE PERSON NAMED IN	er to "Field Evaluation Manu	Secretary resembles	CHECKLOCK
		nntlization		
SUBSTRATE (Estimate percen (Max of 32). Add total number of BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pt BEDROCK [16 pt] COBBLE (65-256 mm) [12 pt GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedr	significant substant	SILT [3 pt] LEAF PACKW FINE DETRITU CLAY OF HARD MUCK [0 pts] ARTIFICIAL [3	metric score is sur OODY DEBRIS [3 IS [3 pts] OPAN [0 pt] pts]	pts] (B)
OF TWO MOST PREDOMINATE	COLA TOTAL COLOR	PES: TOTAL NU	IMBER OF SUBS	TRATE TYPES:
Maximum Pool Depth (Measure evaluation. Avoid plunge pools fro > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	tne maximum p m road culverts (or storm water pipes) (Check C > 5 cm - 10 cm - < 5 cm [5 pts]	NLY one box):	
COMMENTS		MAXIMU	M POOL DEPTH	(centimeters):
BANK FULL WIDTH (Measured a > 4.0 meters (> 13') [30 pts]		> 1.0 m - 1.5 m		
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pt	i] ts]) [5 pts]	1.2
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pt	is]	☐ ≤ 1.0 m (≤ 3'3"	E BANKFULL WI	1.2
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pt	This	AVERAG	E BANKFULL WI	DTH (meters)
24.0 meters (> 13') [30 pts] 23.0 m - 4.0 m (> 9' 7" - 13') [25 pts 21.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts 220 pts 230 pts 240 pts 250 pts 2	This DODPLAIN QUA FLOOD	AVERAGE Information must also be compliTY ☆NOTE: River Left (L) PLAIN QUALITY (Most Predominant per Bank)	E BANKFULL WI Deted and Right (R) as lo	DTH (meters)
4.0 meters (> 13') [30 pts] 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pt COMMENTS RIPARIAN ZONE AND FLO RIPARIAN WIDTH L R (Per Bank) Uide > 10m	This DODPLAIN QUA	AVERAGING Must also be complify ☆NOTE: River Left (L)	E BANKFULL WI	DTH (meters)
** 4.0 meters (> 13') [30 pts] ** 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts ** 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pt ** COMMENTS RIPARIAN ZONE AND FLO RIPARIAN WIDTH L R (Per Bank)	This podplain qua	AVERAGE Information must also be compainty ☆NOTE: River Left (L) PLAIN QUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field	E BANKFULL WI	DTH (meters)
A 4.0 meters (> 13') [30 pts] 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pt] COMMENTS RIPARIAN ZONE AND FLO RIPARIAN WIDTH L R (Per Bank) Wide > 10 m Moderate 5-10 m	This DODPLAIN QUA FLOOD L R	AVERAGE Information must also be comparity ANOTE: River Left (L) PLAIN QUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field	Dieted and Right (R) as lo	DTH (meters) Doking downstream Conservation Tillage Urban or Industrial Open Pasture, Row Crop
24.0 meters (> 13') [30 pts] 23.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 21.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pt] 20 pt] 21 COMMENTS RIPARIAN ZONE AND FLO RIPARIAN WIDTH L R (Per Bank)	This podplain qua	AVERAGE Information must also be compainty ☆NOTE: River Left (L) PLAIN QUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field	E BANKFULL WI	DTH (meters) Doking downstream Conservation Tillage Urban or Industrial Open Pasture, Row
A.0 meters (> 13') [30 pts] 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pt 1.5 m - 3.0 m (> 9' 7" - 4' 8"	This DODPLAIN QUA FLOOD L R D D D D D D D D D D D D D D D D D D D	AVERAGE Information must also be complify ANOTE: River Left (L) PLAIN QUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Fenced Pasture	E BANKFULL WI	DTH (meters) Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction

ADDITIONAL STREAM INF	ORMATION (This Information Must Als	to be Completed):
QHEI PERFORME	ED? - Yes No QHEI Score	(If Yes, Attach Completed QHEI Form)
	DESIGNATED USE(S)	
WWH Name:		Distance from Evaluated Stream
CWH Name:		Distance from Evaluated Stream
EWH Name: CCCC	4 force	Distance from Evaluated Stream Distance from Evaluated Stream
		NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	Iew Albany, OH	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Frankli	Town	nship/City: Gahanna
MISCELLANEOUS		
Base Flow Conditions? (Y/N):	Date of last precipitation: 2	25/27 Quantity: 6.8 "
Photograph Information:		
Elevated Turbidity? (Y/N):	0 Canopy (% open): 159	<u>01</u>
Were samples collected for w	vater chemistry? (Y/N): (Note la	b sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C	C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
		, please explain:
		- Product CAPICATIO
BIOTIC EVALUATI	ION	
erformed? (Y/N):	(If Yes, Record all observations. Vouche	er collections optional. NOTE: all voucher samples must be labeled with the site ta sheets from the Primary Headwater Habitat Assessment Manual)
ish Observed? (Y/N)	Voucher? (Y/N) Salamanders C	Observed? (Y/N) Voucher? (Y/N)
omments Regarding Biology		ttic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
onlinents Regarding Blology.		
DRAWING AN	ND NARRATIVE DESCRIPTION	N OF STREAM REACH (This must be completed):
		or site evaluation and a narrative description of the stream's location
South I h	1	
Mr. My	-	7
7 0/	7	
19		
ow Wo		
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2		
CAT		

SITE NAME/LOCATION NCHP

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3):

TREAM CHANNEL NONE	F/NATURAL CHANNEL []	A STATE OF THE PARTY OF THE PAR	OVERING 5	RECENT OR NO RECOVE
SUBSTRATE (Estimate percent of (Max of 32). Add total number of significant of the control of th	ignificant substrate types foun	esent. Check ONLY two d (Max of 8). Final metric SILT [3 pt] LEAF PACK/WOODY FINE DETRITUS [3] CLAY or HARDPAN MUCK [0 pts] ARTIFICIAL [3 pts]	DEBRIS [3 p	of boxes A & B. PERCENT
Bidr Slabs, Boulder, Cobble, Bedro RE OF TWO MOST PREDOMINATE S		TOTAL NUMBE	R OF SUBSTI	19
evaluation. Avoid plunge pools from > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	n road culverts or storm water	pipes) (Check ONLY of > 5 cm - 10 cm [15 pts] < 5 cm [5 pts] NO WATER OR MO	ots] IST CHANNE	8 11
PANK EILLI WIDTH /Measured as	s the average of 3-4 measure	ements) (Checl		its]
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS Will (* We')	s	≤ 1.0 m (≤ 3'3") [5 p		4.6
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts COMMENTS N COMMENTS	This information	≤ 1.0 m (≤ 3' 3") [5 p AVERAGE BA	NKFULL WII	Y,し
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts	This information ODPLAIN QUALITY AN FLOODPLAIN QUAL L R (Most Pred Mature For	AVERAGE BA must also be complete OTE: River Left (L) and	NKFULL WII	Y,し
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts COMMENTS RIPARIAN ZONE AND FLO RIPARIAN WIDTH L R (Per Bank)	This information ODPLAIN QUALITY FLOODPLAIN QUAL L R (Most Prediction of the control of the co	AVERAGE BA Must also be complete OTE: River Left (L) and TY Ominant per Bank) est, Wetland orest, Shrub or Old Park, New Field	d Right (R) as k	DTH (meters)

0.5

☐ Moderate to Severe Moderate (2 ft/100 ft)

Severe (10 ft/100 ft)

☐ Flat (0.5 ft/100 ft)

STREAM GRADIENT ESTIMATE

Flat to Moderate

QHEI PERFORMED? - Yes No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	The state of the s
d	Distance from Evaluated Stream
CWH Name: Cocky Fork	Distance from Evaluated Stream 0 8 00
MEWH Name: VOCK FORE	Distance non-Evaluated discount of the control of t
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIR	E WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: New Albany N	RCS Soil Map Page: NRCS Soil Map Stream Order
county: Franklin Township	1/city: Granna
MISCELLANEOUS	1177 AX
MISCELLANEOUS Base Flow Conditions? (Y/N): Date of last precipitation:	Quantity: O. 6
Photograph information.	
Elevated Turbidity? (Y/N): Canopy (% open): 1076	<u>D</u> .
Were samples collected for water chemistry? (Y/N): 1 (Note lab sa	mple no or id, and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmnos/cm)
Is the sampling reach representative of the stream (Y/N) If not, ple	ase explain:
erformed? (Y/N): (If Yes, Record all observations. Voucher con ID number. Include appropriate field data should be compared to the control of the cont	eets from the Primary Headwater Habitat Assessment Mandary
DRAWING AND NARRATIVE DESCRIPTION O	F STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for si	te evaluation and a narrative description of the stream's location
w > EDE 7	

PHWH Form Page - 2

ChieEPA

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION NCHP RIVER BASINSCIOTO PIUR VDRAINAGE AREA (mi²) LOLM. SITE NUMBER 3005 LATYU. UUTYO LONG- 87.135 AURIVER CODE LENGTH OF STREAM REACH (ft) SCORER COMMENTS NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions □ NONE / NATURAL CHANNEL □ RECOVERED □ RECOVERING ☐ RECENT OR NO RECOVERY STREAM CHANNEL MODIFICATIONS: SUBSTRATE (Estimate percent of every type of substrate 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. HHEI PERCENT PERCENT Metric BLDR SLABS [16 pts] SILT [3 pt] **Points** ŏŏ BOULDER (>256 mm) [16 pts] O٥ LEAF PACK/WOODY DEBRIS [3 pts] 00 BEDROCK [16 pt] Substrate FINE DETRITUS [3 pts] 00 COBBLE (65-256 mm) [12 pts] Max = 40 00 CLAY or HARDPAN [0 pt] 00 GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] ØΟ SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) A+B Bidr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **TOTAL NUMBER OF SUBSTRATE TYPES:** Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of **Pool Depth** evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] COMMENTS MAXIMUM POOL DEPTH (centimeters): BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Bankfull > 4.0 meters (> 13") [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (≤ 3' 3") [5 pts] Max=30> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS AVERAGE BANKFULL WIDTH (meters) This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream >> RIPARIAN WIDTH FLOODPLAIN QUALITY (Per Bank) (Most Predominant per Bank) 00 Wide >10m Mature Forest, Wetland пп Conservation Tillage Immature Forest, Shrub or Old OD Moderate 5-10m Urban or Industrial Narrow <5m Open Pasture, Row Residential, Park, New Field Crop None Fenced Pasture 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 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	
QHEI PERFORMED? - TYes ANO QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	
CWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE	그 없이 그렇게 그렇게 그렇게 하는 아이들 그렇게 하는 아이들을 하는 때에 가게 하면 하면 하게 그렇게 하는데 하다.
USGS Quadrangle Name: NEW Allpany NR	RCS Soil Map Page: NRCS Soil Map Stream Order
County: Franklin Township	cin: Grahama
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Date of last precipitation:	75 77 Quantity: 0 8
Photograph Information:	
levated Turbidity? (Y/N): N Canopy (% open): 20 7	2
Vere samples collected for water chemistry? (Y/N): (Note lab sam	ple no. or id. and attach results) Lab Number:
ield Measures: Temp (°C) Dissolved Oxygen (mg/l)	
	se explain:
the sampling reach representative of the stream (Y/N) If not, please	se explain:
A PART OF THE PART	
dditional comments/description of pollution impacts:	
erformed? (Y/N): (If Yes, Record all observations. Voucher colle	ets from the Primary Headwater Habitat Assessment Manual) ved? (Y/N)
BIOTIC EVALUATION Informed? (Y/N): (If Yes, Record all observations. Voucher colle ID number. Include appropriate field data sheet the Observed? (Y/N) Voucher? (Y/N) Salamanders Observed; or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Mamments Regarding Biology: DRAWING AND NARRATIVE-DESCRIPTION OF	ved? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) STREAM REACH (This must be completed):
BIOTIC EVALUATION Informed? (Y/N):	ets from the Primary Headwater Habitat Assessment Manual) ved? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) scroinvertebrates Observed? (Y/N) Voucher? (Y/N) STREAM REACH (This must be completed):
BIOTIC EVALUATION Informed? (Y/N): (If Yes, Record all observations. Voucher colle ID number. Include appropriate field data shee ID number. Voucher? (Y/N) Salamanders Observed; (Y/N) Voucher? (Y/N) Aquatic Ma Imments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF Include important landmarks and other features of interest for site	ets from the Primary Headwater Habitat Assessment Manual) ved? (Y/N) Voucher? (Y/N) Voucher? (Y/N) STREAM REACH (This must be completed): evaluation and a narrative description of the stream's location

October 24, 2002 Revision

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

DATE 3	omplete All Items On Thi	is Form - Refe	RIVER BASIN SU OHO LE 1005 107 LONG: 87.834 10 CR COMMENTS	or Ohio's PH	WH Streams" for Instr	uctions
			HANNEL □ RECOVERED □ RE	TILL A PROPER	/ \	
(Max	STRATE (Estimate percent c of 32). Add total number of s BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts BEDROCK [16 pt] BEDROCK [16 pt] BEDROCK [12 pts BERAVEL (2-64 mm) [9 pts] BAND (<2 mm) [6 pts]	PERCENT	substrate present. Check ONLY two ate types found (Max of 8). Final metron TYPE	oy DEBRIS [3 3 pts]	PERCENT	HHI Metr Poir Subst Max =
	Total of Percentages of slabs, Boulder, Cobble, Bedro NO MOST PREDOMINATE S		(A) TOTAL NUMB	ER OF SUBST	(B)	A+1
> 30 ce > 22.5			ool depth within the 61 meter (200 or storm water pipes) (Check ONL)	one box): pts]	EL [0 pts]	Pool D Max =
COM	MENTS		MAXIMUM F	OOL DEPTH	(centimeters):	
> 4.0 m > 3.0 m > 1.5 m	FULL WIDTH (Measured a eters (> 13') [30 pts] - 4.0 m (> 9' 7" - 13') [25 pts - 3.0 m (> 9' 7" - 4' 8") [20 pt	J	24 > 1.0 m - 1.5 m (> 3 ≤ 1.0 m (≤ 3' 3") [5	pts]		Bank Widt Max=
		This	information must also be complete	ed		
	RIPARIAN ZONE AND FLO		LITY ☆NOTE: River Left (L) and PLAIN QUALITY	Right (R) as I	ooking downstream 3	
	(Per Bank) Wide >10m	L R	(Most Predominant per Bank) Mature Forest, Wetland	L R	Consequentian Tillean	
L R	Moderate 5-10m	XD Ø	Immature Forest, Shrub or Old	DA	Conservation Tillage Urban or Industrial	
00		00	Field Residential, Park, New Field	00	Open Pasture, Row	
	Narrow <5m		- Andrews and the first		Crop	
	Narrow <5m None COMMENTS	00	Fenced Pasture	00	Mining or Construction	

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate

Moderate (2 ft/100 ft)

1.0

1.5

☐ Moderate to Severe

Severe (10 ft/100 ft)

3.0

ADDITIONAL STREAM INFORM	ATION (This Information Must A	iso be Completed):	
QHEI PERFORMED? -	Yes No QHEI Score	(If Yes, Attac	ch Completed QHEI Form)
DOWNSTREAM DESIG			Distance from Evaluated Stream
CWH Name:	Carry		Distance from Evaluated Stream Distance from Evaluated Stream
REWH Name: LOCKY	FOIC		Distance from Evaluated Stream
MAPPING: ATTACH CO	PIES OF MAPS, INCLUDING THE	ENTIRE WATERSHED	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NC	a Albany of	NRCS Soil Map Pa	age: NRCS Soil Map Stream Order
		The second second	Manna
MISCELLANEOUS			11.00
Base Flow Conditions? (Y/N):	Date of last precipitation:	125/22	Quantity: 0-8
Photograph Information:			
Elevated Turbidity? (Y/N):	Canopy (% open):		
			nd attach results) Lab Number:
Field Measures: Temp (°C)	Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmhos/cm)
	tive of the stream (Y/N)	net places evoluin:	
Additional comments/description	of pollution impacts:		
BIOTIC EVALUATION	<u> </u>		
	D number. Include appropriate field	data sheets from the Prin	. NOTE: all voucher samples must be labeled with mary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) V	/oucher? (Y/N) Salamander /N) Voucher? (Y/N) Aq	s Observed? (Y/N) Number of the contract of th	Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) V
Comments Regarding Biology:			
			REACH (This <u>must</u> be completed):
Include important landma	rks and other features of interes	t for site evaluation an	nd a narrative description of the stream's loca
			Pro
	1 - 1 -	1	1614
	784		,)
- (B)	J- L		
FLOW 4 3	2		
	18		

Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION SITE NUMBER 5000 RIVER BASIN SCIOTO LIVER DRAINAGE AREA (mi²) O . (Im. LENGTH OF STREAM REACH (ft) 200' LATUD 001994 LONG - \$785-557 RIVER CODE RIVER MILE DATE 3/2/17 SCORER REK COMMENTS NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL □ NONE / NATURAL CHANNEL □ RECOVERED □ RECOVERING ▼ RECENT OR NO RECOVERY **MODIFICATIONS:** Culvert, Road King SUBSTRATE (Estimate percent of every type of substrate 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. HHEI Metric PERCENT 88 **Points** BLDR SLABS [16 pts] SILT [3 pt] BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] Substrate 00 BEDROCK [16 pt] 00 FINE DETRITUS [3 pts] Max = 4000 COBBLE (65-256 mm) [12 pts] oo CLAY or HARDPAN [0 pt] oo GRAVEL (2-64 mm) [9 pts] OO MUCK [0 pts] Ø۵ SAND (<2 mm) [6 pts] 00 ARTIFICIAL [3 pts] Total of Percentages of (B) Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: **Pool Depth** 2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] < 5 cm [5 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] COMMENTS MAXIMUM POOL DEPTH (centimeters): BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Bankfull > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width ≤ 1.0 m (≤ 3' 3") [5 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9'7" - 4'8") [20 pts] **AVERAGE BANKFULL WIDTH (meters)** COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY (Most Predominant per Bank) (Per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old 00 Urban or Industrial 00 Moderate 5-10m Open Pasture, Row 四四 Narrow <5m Residential, Park, New Field Crop ٥٥ Fenced Pasture Mining or Construction None COMMENTS

(Check ONLY one box):

☐ Moderate to Severe

2.0

2.5

Moist Channel, isolated pools, no flow (Intermittent)

3.0

>3

Severe (10 ft/100 ft)

Dry channel, no water (Ephemeral)

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

SINUOSITY (Number of bends per 61 m (200 ft) of channel)

1.0

1.5

☐ Moderate (2 ft/100 ft)

Subsurface flow with isolated pools (Interstitial)

Flat to Moderate

Flat (0.5 ft/100 ft)

Stream Flowing

COMMENTS

STREAM GRADIENT ESTIMATE

None

0.5

QHEI PERFORMED? - Tyes No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: 1819 Now nut Creek	Distance from Evaluated Stream O. (o
	Distance from Evaluated Stream
	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE W	그리고 그리고 하는 것이 되었다.
SGS Quadrangle Name: New Albany NRCS	
ounty: Franklin Township / Ci	ity: Grahanna
MISCELLANEOUS	
ase Flow Conditions? (Y/N): Date of last precipitation: 2 25	122 Quantity: 08"
hotograph Information:	
levated Turbidity? (Y/N): \(\sigma\) Canopy (% open): \(\frac{7070}{}\)	
vere samples collected for water chemistry? (Y/N): (Note lab samples	e no. or id. and attach results) Lab Number:
ield Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
the sampling reach representative of the stream (Y/N)	
This, please	explain.
•	
BIOTIC EVALUATION erformed? (Y/N):	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N)
BIOTIC EVALUATION Gerformed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets ish Observed? (Y/N) Voucher? (Y/N) Salamanders Observe rogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macri	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N) Voucher? (Y/N)
BIOTIC EVALUATION erformed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets ish Observed? (Y/N) Voucher?) (Y/N) Salamariders Observe rogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macromments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF S	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N)
BIOTIC EVALUATION erformed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets ish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed rogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macromments Regarding Biology:	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N)
BIOTIC EVALUATION erformed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets ish Observed? (Y/N) Voucher? (Y/N) Salamaniders Observe rogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macromments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF S	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N)
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BIOTIC EVALUATION Performed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets ish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macromments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF Salamanders of interest for site expression of the property of th	voucher? (Y/N) Vouche
BIOTIC EVALUATION Performed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets ish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macromments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF Salamanders of interest for site expression of the property of th	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N)
BIOTIC EVALUATION Performed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets ish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macromments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF Salamanders of interest for site expression of the property of th	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N)
Performed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets is high Observed? (Y/N) Voucher? (Y/N) Salamanders Observed frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macis Comments Regarding Biology:	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N)
BIOTIC EVALUATION Performed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets ish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macromments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF Salamanders of interest for site expression of the property of th	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N)
BIOTIC EVALUATION erformed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets ish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed rogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macromments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF Salamanders Observed? Include important landmarks and other features of interest for site each of the salamanders of	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N)
BIOTIC EVALUATION reformed? (Y/N): (If Yes, Record all observations. Voucher collect ID number. Include appropriate field data sheets ish Observed? (Y/N) Voucher? (Y/N) Salamanders Observerogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macromments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF Salamanders Observed? (Y/N) Include important landmarks and other features of interest for site each of the salamanders of th	s from the Primary Headwater Habitat Assessment Manual) d? (Y/N)

Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION NCHIP DRAINAGE AREA (mi²) O. RIVER BASIN SCIOTO SITE NUMBER 777 LENGTH OF STREAM REACH (1) 150 LAT. 10 . DOY HOUNG. - 8 2 . 84 PRIVER CODE UZU SCORER DELL COMMENTS NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions □ NONE / NATURAL CHANNEL □ RECOVERED □ RECOVERING PRECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric PERCENT PERCENT TYPE **Points** SILT [3 pt] BLDR SLABS [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 00 BOULDER (>256 mm) [16 pts] Substrate FINE DETRITUS [3 pts] 00 BEDROCK [16 pt] Max = 40 пп CLAY or HARDPAN [0 pt] COBBLE (65-256 mm) [12 pts] 00 DO GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 00 ARTIFICIAL [3 pts] 00 SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock TOTAL NUMBER OF SUBSTRATE TYPES: SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Pool Depth Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) 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 [5 pts] Max = 30> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] NO WATER OR MOIST CHANNEL [0 pts] > 10 - 22.5 cm [25 pts] MAXIMUM POOL DEPTH (centimeters): COMMENTS Bankfull BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Width > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 4.0 meters (> 13') [30 pts] Max=30 ≤ 1.0 m (≤ 3' 3") [5 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] AVERAGE BANKFULL WIDTH (meters) COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream & **RIPARIAN WIDTH** FLOODPLAIN QUALITY (Most Predominant per Bank) (Per Bank) Mature Forest, Wetland Wide >10m Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field

Open Pasture, Row Residential, Park, New Field Narrow <5m Crop Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing 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 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)

DDITIONAL STREAM INFORMATION (This	Information Must Also be Com	pleted):	
QHEI PERFORMED? - TYes	No QHEI Score(II	f Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED US	E(S)		
WWH Name: Big Walnut	clere	Distance from Evaluated Stream 0.58	m
CWH Name:		Distance from Evaluated Stream	_
EWH Name:		Distance from Evaluated Stream	_
	APS, INCLUDING THE ENTIRE WA	ATERSHED AREA. CLEARLY MARK THE SITE LOCATION	
JSGS Quadrangle Name: NOLL	A Dany NRCS	Soil Map Page: NRCS Soil Map Stream Order	
county: ManIUIN	Township / City	Canana	
MISCELLANEOUS	,		
Base Flow Conditions? (Y/N): Date	of last precipitation: 225	27 Quantity: 0.8	
Photograph Information:	,		
Elevated Turbidity? (Y/N): Ca	nopy (% open): 7670		
Were samples collected for water chemistry?	(Y/N): Note lab sample	no. or id. and attach results) Lab Number:	
Field Measures: Temp (°C) Diss	colved Oxygen (mg/l)p	oH (S.U.) Conductivity (µmhos/cm)	
		explain:	
and the second s	ucam (1/14) If not, please 6	explain	
ID number. In	nclude appropriate field data sheets	ions optional. NOTE: all voucher samples must be labeled wit from the Primary Headwater Habitat Assessment Manual) d? (Y/N) Voucher? (Y/N) Voucher? (Y/N)	h the site
Comments Regarding Biology:		vocalida (ma)	_
DRAWING AND NARRA	TIVE DESCRIPTION OF S	TREAM REACH (This must be completed):	
Include important landmarks and other	her features of interest for site e	valuation and a narrative description of the stream's loc	ation
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ChieFPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3):

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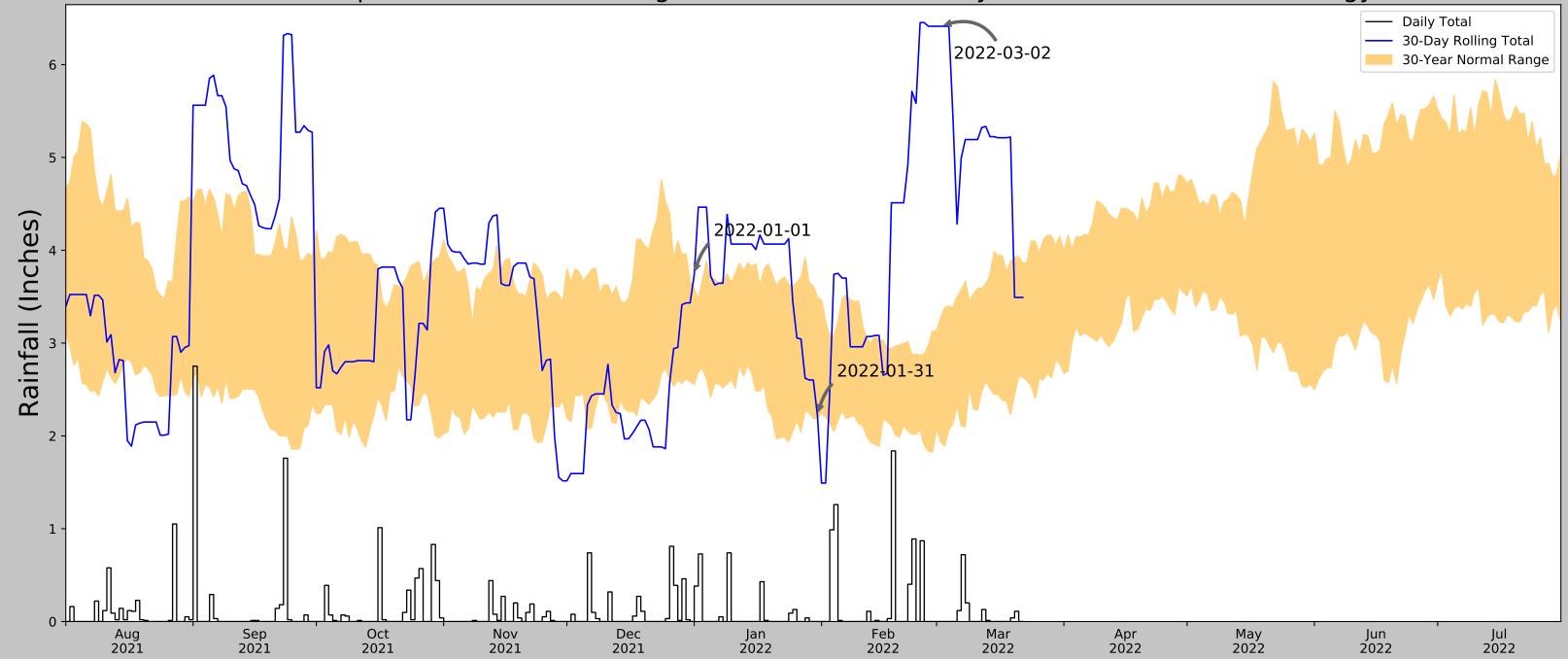
NOTE: Complete All Items On This Form STREAM CHANNEL NONE / NAT	RIVER BASIN SCIPT OF LAT. 40.000 19 LONG. S2.80390 RIVER COMMENTS	nio's PHWH Streams" for Instructions
(Max of 32). Add total number of significa	ry type of substrate present. Check ONLY two present substrate types found (Max of 8). Final metric so SERCENT TYPE SILT [3 pt] LEAF PACK/WOODY D FINE DETRITUS [3 pts] CLAY or HARDPAN [0 MUCK [0 pts] ARTIFICIAL [3 pts]	PERCENT Point BEBRIS [3 pts] Substra
evaluation. Avoid plunge pools from road > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]		Max = 5
OMMENTS	AVERAGE BAN	IKFULL WIDTH (meters)
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS	This information must also be completed PLAIN QUALITY ANOTE: River Left (L) and R FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Fenced Pasture	ight (R) as looking downstream ★ L R Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction
Stream Flowing Subsurface flow with isolated pool	ls (Interstitial)	I, isolated pools, no flow (Intermittent) no water (Ephemeral)
SINUOSITY (Number of bends por None 0.5 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate	er 61 m (200 ft) of channel) (Check ONLY one both 1.0	3.0

QHEI PERFORMED? - 2 Yes No QHEI Score(If	Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	Too, Made Completed at Lety only
	Distance from Evaluated Stream D 67m
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WA	
USGS Quadrangle Name: New Awary NRCS	
County: VanVII Township / City	Garana
MISCELLANEOUS	-7 6 9 11
Base Flow Conditions? (Y/N): Date of last precipitation: 2 25	Quantity: 0.8
Photograph Information:	
Elevated Turbidity? (Y/N): Ocanopy (% open): 8577	
Were samples collected for water chemistry? (Y/N): (Note lab sample	no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pl	H (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please e	explain:
Additional comments/description of pollution impacts:	
	ons optional. NOTE: all voucher samples must be labeled with the s
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macro	from the Primary Headwater Habitat Assessment Manual) ? (Y/N) Voucher? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	onivertebrates observed? (FIN) 100 Voucher? (FIN) 1
DRAWING AND NARRATIVE DESCRIPTION OF S	
Include important landmarks and other features of interest for site ev	valuation and a narrative description of the stream's location
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Appendix C | USACE Antecedent Precipitation Tool

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



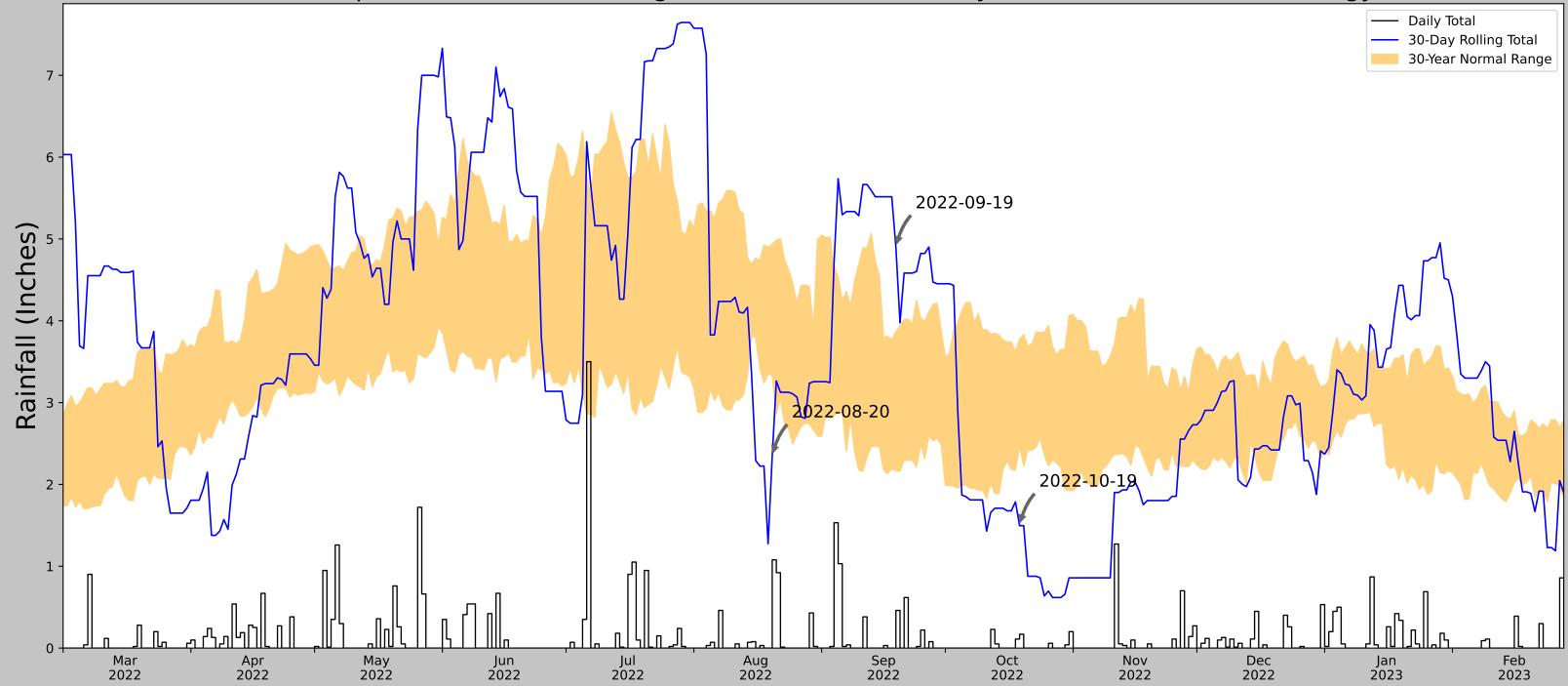
Coordinates	40.011997, -82.572119
Observation Date	2022-03-02
Elevation (ft)	1094.88
Drought Index (PDSI)	Severe wetness (2022-02)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-03-02	1.933071	3.275197	6.413386	Wet	3	3	9
2022-01-31	2.189764	3.494882	2.220473	Normal	2	2	4
2022-01-01	2.555906	3.585433	3.736221	Wet	3	1	3
Result							Wetter than Normal - 16

CORPS OF ENGLIS	Figure and tables made by the Antecedent Precipitation Tool Version 1.0
	Written by Jason Deters
SOLATORY PRUS	U.S. Army Corps of Engineers

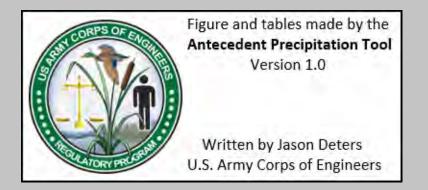
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
			, ,		•		
BUCKEYE LAKE 1 N	39.9522, -82.4819	888.123	6.315	206.757	4.148	11082	90
KIRKERSVILLE 3.3 N	39.998, -82.5986	1075.131	1.703	19.749	0.8	8	0
PATASKALA 3.2 E	39.998, -82.6136	1074.147	2.399	20.733	1.129	7	0
GRANVILLE 2.6 WSW	40.0527, -82.5445	1064.961	3.169	29.919	1.521	10	0
PATASKALA 2.1 ENE	40.013, -82.6381	1171.916	3.492	77.036	1.841	1	0
PATASKALA 2.0 NE	40.024, -82.6511	1216.864	4.261	121.984	2.437	36	0
ALEXANDRIA 2.1 NNW	40.1182, -82.6265	1080.053	7.881	14.827	3.663	32	0
NEWARK HEATH AP	40.0228, -82.4625	883.858	5.848	211.022	3.866	3	0
UTICA 4 WSW	40.2061, -82.52	1134.843	13.691	39.963	6.708	1	0
NEWARK WTR WKS	40.0875, -82.4128	834.974	9.911	259.906	7.036	173	0

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



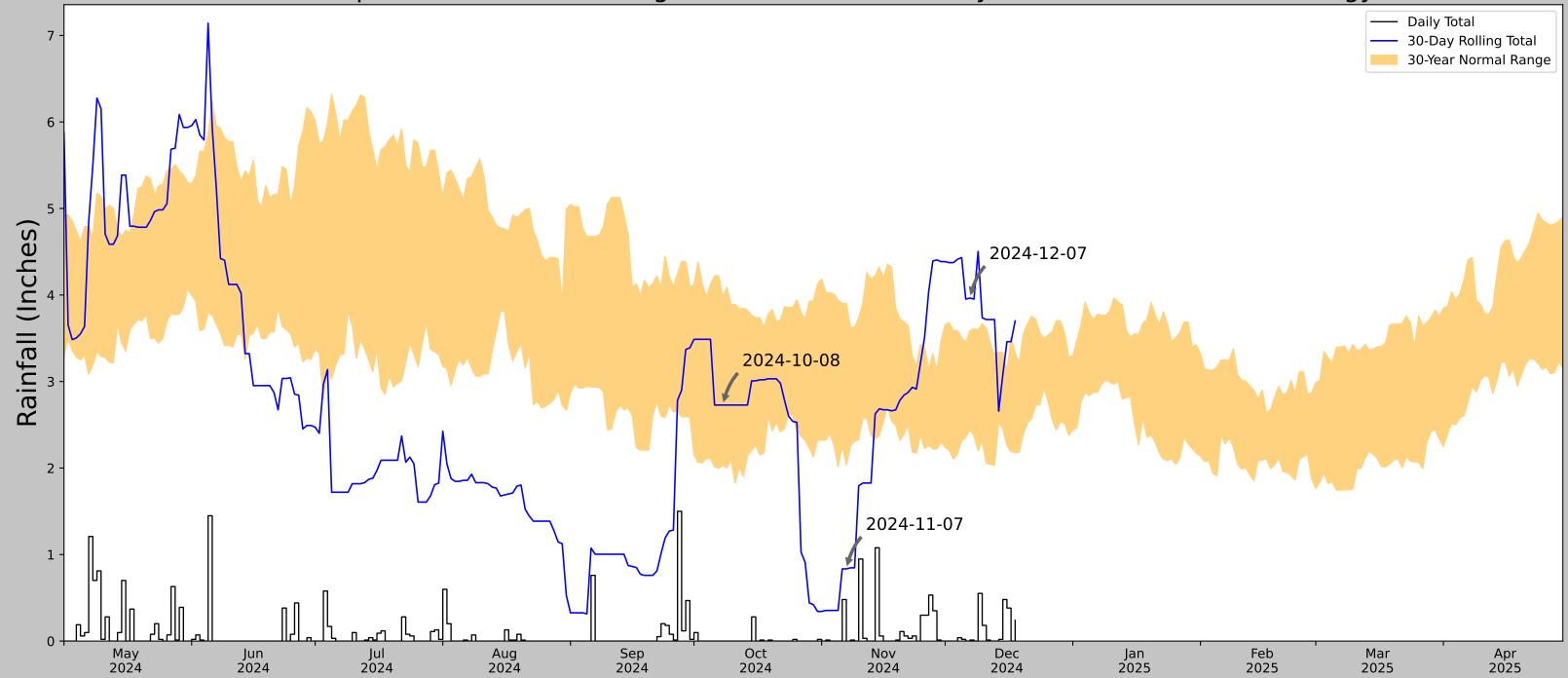
Coordinates	40.021777, -82.950994
	'
Observation Date	2022-10-19
Elevation (ft)	834.369
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-10-19	2.468504	3.775197	1.496063	Dry	1	3	3
2022-09-19	2.169685	3.864567	4.897638	Wet	3	2	6
2022-08-20	3.333858	4.935827	2.34252	Dry	1	1	1
Result							Normal Conditions - 10



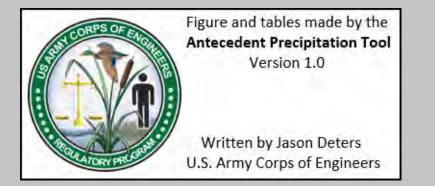
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
COLUMBUS-HAP CREMEAN WP	40.0603, -82.8942	831.037	4.014	3.332	1.82	10742	90
COLUMBUS 8.2 NE	40.0639, -82.8673	955.053	1.444	124.016	0.829	7	0
COLUMBUS 3.5 NE	40.0287, -82.9477	833.005	3.574	1.968	1.615	2	0
WESTERVILLE 0.2 WNW	40.1226, -82.9213	886.155	4.537	55.118	2.292	43	0
JOHN GLENN INTL AP	39.9906, -82.8769	810.039	4.902	20.998	2.309	559	0

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



Coordinates	40.020811, -82.922588
Observation Date	2024-12-07
Elevation (ft)	828.822
Drought Index (PDSI)	Severe drought (2024-11)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-12-07	2.442126	3.587795	3.964567	Wet	3	3	9
2024-11-07	2.036221	3.903937	0.834646	Dry	1	2	2
2024-10-08	2.032284	3.978347	2.728347	Normal	2	1	2
Result							Normal Conditions - 13



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
COLUMBUS-HAP CREMEAN WP	40.0603, -82.8942	831.037	3.114	2.215	1.408	10771	78
COLUMBUS 8.2 NE	40.0639, -82.8673	955.053	1.444	124.016	0.829	8	11
GAHANNA 1.2 NNE	40.0408, -82.868	874.016	1.933	42.979	0.953	0	1
COLUMBUS 3.5 NE	40.0287, -82.9477	833.005	3.574	1.968	1.615	2	0
WESTERVILLE 3.0 ESE	40.1107, -82.8622	875.0	3.871	43.963	1.912	1	0
WESTERVILLE 0.2 WNW	40.1226, -82.9213	886.155	4.537	55.118	2.292	43	0
JOHN GLENN INTL AP	39.9906, -82.8769	810.039	4.902	20.998	2.309	528	0



Appendix D | Photographs



Photo #1 -Looking east at Wetland 8; near wetland flag W8.4



Photo #2: Looking at west at upland woodlands near wetland flag W8.4.



Photo #3: Looking north at Wetland 9; near wetland flag W9.5



Photo #4: Looking at west at upland maintained lawn/early successional vegetation near wetland flag W9.5.



Photo #5: Looking north at typical conditions at Stelzer inlet.



Photo #6: Looking north at typical conditions at Stygler inlet.



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